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Leading Internal Medicine, Improving Lives

Better for Patients and the Planet: Why Your Health Care Facility Should Cut Greenhouse Gas Emissions and Waste

Climate change is a threat to human health, increasing the risk of heat-related illness and mortality, respiratory and infectious diseases, behavioral health issues, and other conditions (1). Certain populations, including people with low-incomes, older adults, and people of color are especially vulnerable (2). The health care sector consumes a massive amount of energy, releasing large amounts of carbon dioxide and other greenhouse gases into the atmosphere. Globally, the health care sector contributes 4.4% of net emissions (3) and the US health care sector accounted for 8.5% of the country's total carbon emissions in 2018 (4). Hospitals require round-the-clock energy consumption to power ventilators, heating and cooling systems, lighting, and medical equipment. They also generate greenhouse gas emissions associated with food service, waste disposal, and transportation. Hospitals produce large amounts of waste, from single-use disposable medical items to wastewater. In a literature review on the energy burden and environmental impact of health services, Brown and colleagues estimate that "a 10% reduction in emissions from just the US health system would have the same atmospheric impact as a 10% reduction in emissions from the entire Australian economy" (5).

Reducing your facility's electricity and transportation-associated emissions can yield health co-benefits such as reductions in respiratory diseases from lower air pollution and better cardiovascular health from active transportation like walking and cycling (6,7). Addressing climate change is a priority for health care workers. According to a 2023 Commonwealth Fund survey, 79% of respondents agreed that it was important that their health care organization plays a role in addressing or minimizing climate change and its environmental impact (8). Adopting environmentally sustainable practices at your facility can reduce costs. By encouraging recycling of plastic items, the University of Chicago Medical Center cut waste costs from $55,000 to $35,000 a month.

The NHS in England succeeded in lowering its carbon footprint by 18.5% from 2007-2017 after mounting an aggressive effort to reduce its carbon emissions (9). In 2022, over 60 U.S. hospitals, health systems, and other stakeholders committed to taking inventory of supply-chain emissions, creating climate resilience plans, and cutting their emissions in half by 2030 and achieving net-zero emissions by 2050 (10). The Inflation Reduction Act provides new resources, like the Investment Tax Credit, to help hospitals and other facilities increase use of clean energy and strengthen resilience against severe weather events (11).

The Greenhouse Gas Protocol categorizes emissions by scope:

Scope 1: Direct emissions from sources owned or controlled by the organization. In a hospital, this may include on-site boilers, anesthetic gases, and fuels used by the hospital's transportation fleet. According to one estimate, Scope 1 emissions make up 7% of all U.S. health care sector emissions (12).

Scope 2: Purchased energy, such as electricity. Accounts for 11% of health care sector emissions.

Scope 3: Indirect emissions from the health sector supply chain, also called value chain emissions, including those derived from pharmaceuticals and chemicals, construction, plastics, and waste. In 2018, 82% of health sector emissions were from Scope 3 sources.

This toolkit provides guidance and resources on how hospitals and other facilities can reduce greenhouse gas emissions and waste. ACP has developed sustainability guides on the following topics:

- Transportation
- Energy
- Waste and Supply Chain Emissions
- Food Service

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As professionals invested in improving human health, physicians and other health care professionals, facility managers, support staff and others must work together to reduce the health sector's carbon footprint. This toolkit provides more detail on each of these action categories and case studies highlighting facilities that are leading the way to a healthier, sustainable future.

General Resources:

Health Care Climate Council **https://climatecouncil.noharm.org/**

National Academy of Medicine: Action Collaborative on Decarbonizing the U.S. Health Sector **https://nam.edu/programs/climate-change-and-human-health/action-collaborative-on-decarbonizing-the-u-s-health-sector/**

U.S. Office of Climate Change and Health Equity: Compendium of Federal Resources for Health Sector Emissions Reduction and Resilience **https://www.hhs.gov/climate-change-health-equity-environmental-justice/climate-change-health-equity/quickfinder-ira/index.html**

U.S. Agency for Healthcare Research and Quality: Reducing Healthcare Carbon Emissions: A Primer on Measures and Actions for Healthcare Organizations to Mitigate Climate Change **https://www.ahrq.gov/sites/default/files/wysiwyg/healthsystemsresearch/decarbonization/decarbonization.pdf**

United States Global Change Research Program: Fifth National Climate Assessment: Human Health **https://nca2023.globalchange.gov/chapter/15/**

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