



AMA Journal of Ethics®

October 2022, Volume 24, Number 10: E915-918

FROM THE EDITOR

Why Health Care Needs Sustainable Waste Stream Management

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Health Care Is a Major Polluter

Over the past 3 to 4 decades, evidence of climate change's adverse influence on health has amassed.^{1,2} Climate change is fueled by burning fossil fuels, resulting in unprecedented, threatening atmospheric CO₂ concentrations.² The US health care sector is a significant contributor to global greenhouse gas (GHG) emissions, and, if it were its own country, it would be the 13th largest GHG emitter on the planet and the second largest industry contributing to landfill waste.^{3,4,5,6,7} In 2018 alone, pollution output from US health systems translated to a loss of 388 000 disability-adjusted life years.⁸ Health care not only contributes directly and indirectly to climate change, but also adversely influences communities' health through solid, liquid, and gas emissions.

Our Fractured Relationship With Nature

Our health systems and economies are built on the assumption of infinite natural resources and the continued existence of healthy ecosystems, which are critical to human health. Investing in evidence-based solutions to reduce health care systems' waste can safeguard the health of our planet now and in the future. The urgency to do this has never been clearer. The 2019 Intergovernmental Panel on Climate Change special report highlighted the need to make significant cuts in GHG—45% by 2030—in order to prevent temperature exceeding 1.5 °C above preindustrial levels.^{2,9} Yet the Earth's surface has already warmed 1.1 °C relative to preindustrial levels.¹⁰ Although the margin of error is slim, we have the solutions needed to prevent irreversible warming and cut emissions and solid waste production significantly; the health sector must do its part.⁹ This issue of the *AMA Journal of Ethics* emphasizes that solutions needed to achieve a health system that is low waste and net-zero (ie, one in which GHG emissions released into and removed from the atmosphere are balanced) align with global sustainability targets and would incentivize fiscal and environmental stewardship.^{9,11}

Health Care Must Do No Harm

When health professionals pledge to “do no harm” to patients, they seem to do so at the expense of local communities and the planet. Health professionals share ethical obligations to critically examine the sector's carbon footprint, divest from fossil fuels, and reduce solid waste production by investing in climate-smart health care. Given changing climate, health professionals must renew their commitment and redefine what it means to do no harm.

Given the adverse health consequences of pollution and waste, the health care sector should be the one to lead the way toward a sustainable economy; by framing waste reduction as a health issue, it is well poised to provide a shared language and universally agreed-upon values.¹² Sustainable health systems advance public health, promote equity, and respect planetary boundaries¹³ by restructuring supply chains to reduce dependence on single-use, disposable health care items and by transitioning to a clean energy health care grid.^{12,14}

The decision-making body of the United Nations Framework Convention on Climate Change—the Conference of the Parties (COP)—ended its 2021 conference (COP26) with small but significant commitments to health care sustainability.¹² While commitments to addressing the health impacts of climate change were not robust, for the first time in the history of the conference, climate-health issues had a large presence at the summit.¹² COP26 paved the way for 50 countries to commit to developing low waste, low-carbon health systems.¹⁵ Furthermore, the US Department of Health and Human Services committed to reducing emissions at federal health facilities,¹⁶ and 19 private US health systems committed to reducing GHG emissions.¹⁶ We await meaningful action, but strides taken to include health system sustainability commitments at COP26 express growing understanding of the interdependence and interconnectedness of natural resource stewardship and successful, long-term health care.¹²

Environmental Injustice

Climate change exacerbates social inequity, disproportionately affecting marginalized and socioeconomically disadvantaged populations; its burdens fall heavily on the shoulders of Black, Indigenous, and people of color (BIPOC) around the world.¹⁷ These communities contribute least to the pollution and waste that fuel the climate crisis yet suffer disproportionately from increased rates of cardiorespiratory illness, mental health disorders, adverse birth outcomes, and toxic exposures as a result of it.^{1,2}

The health care industry should consider its role in contributing to—and address—the **unequal impact of waste** on BIPOC communities, which is rooted in a history of environmental and systemic racism. Despite BIPOC communities' efforts to address health consequences of environmental degradation during the US civil rights movement of the 1960s, the racial composition of communities continues to be the number one indicator of where toxic waste facilities, landfills, and waste processing centers are located in the United States.¹⁷ While policies to combat waste and pollution are slowly being implemented, minoritized communities are the last to benefit, and inequity persists.^{18,19}

This Theme Issue

We can reimagine a world in which we do not have to practice medicine at the expense of the planetary resources that sustain us. This issue articulates why building a health care system centered on **sustainability, resource stewardship, low waste**, and zero-emissions is one that invests in cost savings, resilience, expanded capacity, and equity. The contributors redefine what waste in health care means and reflect on public health values at the heart of a sustainable health care system that prioritize preventative medicine.¹² As the contributors illuminate, health systems must fully transform to meet sustainability standards and to uphold the commitment to safeguarding the health of patients, and must do so with an urgent sense of duty to future generations.¹¹

Will the health sector rise to the occasion? This theme issue considers how to redesign our unsustainable health system to be one that delivers care not at the expense of future generations and our planet but *for* them. It explores how to use existing technologies to create a system well poised to adapt to the challenges that lie before us; discusses how a sustainable health system builds a resilient health care workforce and addresses environmental injustice; and investigates which entities bear ultimate responsibility for waste generated and consequent harms to patients and communities. Finally, the contributors outline mechanisms by which health systems science can prepare clinicians to become change agents, innovators, and sources of hope for a low-waste, net-zero health care system.

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Citation

AMA J Ethics. 2022;24(10):E915-918.

DOI

10.1001/amajethics.2022.915.

Conflict of Interest Disclosure

The author(s) had no conflicts of interest to disclose.

The viewpoints expressed in this article are those of the author(s) and do not necessarily reflect the views and policies of the AMA.

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ISSN 2376-6980