

Report raises alarm about increasing danger killing thousands yearly



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Climate change is killing Americans in surprising ways and waste created by health care itself is part of the problem, a report in one of the world's most prestigious medical journals says.

The report, published this week in the British medical journal *The Lancet*, is part of a global study looking at how climate change is affecting the world's health.

Climate change has created a health crisis that continues to worsen, one that threatens to undermine the last 50 years of gains in public health, it says.

The *Lancet Countdown on Health and Climate Change* report has been issued each year since 2016. This year's report calls upon the nations of the world, and the United States, to rapidly reduce the amounts of fossil fuels being burned while increasing the transition to clean energy.

The health harms created by climate change stack up to being "the same order of magnitude as the harms associated with medical errors," said Jonathan Buonocore, a professor in the Department of Environmental Health at the School of Public Health, Boston University and one of the paper's authors.

(Preventable medical errors kill 250,000 Americans each year, according to a study by researchers from Johns Hopkins University School of Medicine.)

Climate change impacts Americans' health in multiple ways. The report cites fossil-fuel related air pollution, tropical cyclones worsened by climate change, heat waves' links to preterm births and future climate change effects.

On the positive side, U.S. adoption of wind and solar power has led to an estimated 1,200 to 1,600 fewer premature deaths in the U.S. in 2022 due to better air quality.

Waste from health care is part of the problem, researchers say

The report highlights the health care sector's connection to climate change, with 8.5% of U.S. greenhouse gas emissions coming from the industry. Researchers note there is no national program that requires it to measure, manage or disclose its data.

The number includes not just energy used by hospitals and clinics but also the huge amounts of medical waste, often single-use plastic devices, which are thrown away each day, said Buonocore.

All that disposable plastic is designed to help keep hospitals and operating rooms sterile, but researchers say there are ways to cut down on waste without endangering patients.

The costs of heating and cooling are also an issue. Operating room HVAC systems run 24/7 whether there's a patient in them or not, said Dr. Shaneeta Johnson, a professor of Surgery at Morehouse School of Medicine in Atlanta, Georgia.

Operating rooms create lots of waste

Operating rooms contribute to this in ways patients may not think about, said Johnson.

"The operating room is responsible for about 30% of medical waste in the United States," she said. That includes disposable instruments, plastic drapes, syringes, tubing, bandages and anything that might be contaminated with bodily fluids. The disposal of medical waste is regulated and in many cases it must be incinerated.

One thing hospitals have been working on is the creation of what are known as "lean" surgical trays, meaning only sterilizing and putting instruments out on surgical trays that the surgeon is likely to need, rather than every possible one they might want. This is done by working with surgeons so they can select the instruments they actually use while leaving out those that aren't needed.

"There are significant opportunities to 'lean' surgical trays so that we're not autoclaving as many instruments," Johnson said. Studies show that such efforts can reduce the carbon footprint of a medical institution.

An autoclave is a machine that exposes surgical supplies to hot steam under pressure to sterilize them.

“We have to work harder on reducing waste. Both physical waste and also the wasted resources from overdiagnosis and overtreatment. All of this would save the country a lot of money and dramatically lower the carbon footprint of our industry,” said Dr. Vivian Lee, author of the book, "The Long Fix", and an executive fellow at the Harvard Business School, who's written on the topic.

She points out that for every patient in a hospital, over 30 pounds of waste is produced per day in the U.S., mostly due to increased disposables. Some of the waste is for procedures that are essentially useless. “Many professional societies have put together long lists of unnecessary treatments, like antibiotics for the common cold or X-rays for back pain. All of these waste resources, lead to excess carbon footprint, and very rarely help patients,” Lee said.