

# Caribbean researchers innovate to protect cancer patients from compounding disasters

May 9 2024

---



Credit: Pixabay/CC0 Public Domain

Researchers at Sylvester Comprehensive Cancer Center at the University of Miami Miller School of Medicine assembled a multidisciplinary team and recently published a "Personal View" paper exploring the unique

challenges of providing timely, effective care in developing Caribbean states impacted "first and worst" by climate hazards and rising cancer rates.

The group featured five Caribbean authors, including Sylvester Ph.D. student, Lashae Rolle. [The findings](#) are published in *The Lancet Oncology*.

"Our author team brings together a compilation of wisdom from leading Caribbean cancer specialists, researchers and climate activists, alongside U.S.-based experts—a remarkably multidisciplinary group," said James Shultz, Ph.D., M.S., a Sylvester faculty member, associate professor in the Department of Public Health Sciences and disaster public health lead for the Global Institute for Community Health and Development at the Miller School, and co-senior author of the "Personal View" paper.

## **Compounding disaster hazards**

The Caribbean's geographically dispersed populations create impediments to timely cancer screening and treatment, and there is a shortage of centers providing comprehensive cancer care in the region.

The paper connects Caribbean hurricanes and heat risks to accelerating climate change. It describes how climate-driven risks negatively affect every step in the cancer control continuum, from etiology to survivorship.

Many Caribbean cancer patients aren't diagnosed until their cancer is at a later stage because they have to travel to other islands for care. When climate hazards strike, traveling between islands may be impossible.

Additionally, climate-exacerbated disasters can reveal infrastructure shortcomings. When Hurricane Maria flooded Puerto Rico in 2017,

[toxic waste](#) and hazardous materials storage sites overflowed and exposed people living nearby cancer-causing chemicals. Experts believe these flooding risks are only growing as climate change warms the ocean and strengthens storms.

Cancer symptoms and side effects can also worsen due to climate impacts. Many people receiving chemotherapy for cancer have trouble regulating their body temperatures. As climate change raises heat and humidity in tropical regions, patients become more susceptible to heat-related illnesses.

The physical health consequences of living with cancer are accompanied by a range of psychological stressors, said Zelde Espinel, M.D., M.P.H., Sylvester psycho-oncologist and disaster psychiatrist, and disaster mental health lead for the Global Institute. Extreme, climate-driven weather events pose additional threats to physical and mental health.

## **Reasons for optimism**

Teams in the Caribbean have made significant progress in protecting cancer patients from the risks posed by these hazards. Their solutions serve as models for other regions.

In the aftermath of Hurricane Dorian in 2019, Caribbean experts shifted toward building stormproof underground microgrids to generate electricity for treatment centers providing critical cancer therapies, including radiation. These grids include solar panels bolted to a solid foundation on the ground rather than clipped to the roofs, so they won't blow off during a storm. The approach eliminates relying on diesel-powered backup generators that often cannot be maintained—and emit noxious air pollution—when strong winds and rain knock out the primary source of power.

The Centers for Medicaid and Medicare Services took a cue from the Caribbean experience and began encouraging U.S. health care facilities to build similar microgrid systems.

"Despite facing disproportionate challenges and risks that are amplified by [climate change](#) and compounding disasters, the Caribbean is both a creator and a donor of really innovative strategies that can be replicated and adapted to cancer care nationally in the U.S. and worldwide," said Dr. Shultz.

**More information:** Ana Patricia Ortiz et al, Protecting Caribbean patients diagnosed with cancer from compounding disasters, *The Lancet Oncology* (2024). [DOI: 10.1016/S1470-2045\(24\)00071-8](https://doi.org/10.1016/S1470-2045(24)00071-8)

Provided by Sylvester Comprehensive Cancer Center

Citation: Caribbean researchers innovate to protect cancer patients from compounding disasters (2024, May 9) retrieved 26 June 2024 from <https://medicalxpress.com/news/2024-05-caribbean-cancer-patients-compounding-disasters.html>

<p>This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.</p>
--