



New York University Department of
Population Health, New York, USA

Twitter handle: @alex_azan

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Primary care needs to rise to the challenge of caring for patients during climate disasters

Alexander Azan describes how this year's wildfires were an urgent reminder of how primary care needs to adapt to the threat climate change poses to health and health equity

Alexander Azan *internal medicine physician and climate health research fellow*

As a primary care physician and climate health research fellow, I'm alarmed by how unprepared I was to counsel and care for my patients during an air quality emergency in New York City earlier this year. In June 2023, air pollution from wildfires raging in Canada moved into regions of the northeastern United States. As a result, communities in New York City were exposed to the worst air quality in the city's recorded history.¹

The first day wildfire smoke blanketed New York City, I was seeing patients. Daylight had quickly turned into a dim, hazy, orange glow, and the air inside my clinic began to smell like burning campfire wood. I work at a federally qualified health centre, which is federally funded to provide preventive medical care to underserved communities in the US. Many of my patients have multiple, chronic health conditions that increase their risk of severe health outcomes from exposure to poor air quality. Without informed guidance to advise them, many of my patients arrived at their appointments unmasked and in notable respiratory distress. Outside, the air quality index (AQI) neared its maximum of 500,² far beyond the AQI of 101-150 that is deemed unhealthy for sensitive populations.

In response, I called my patients throughout the day to offer telemedicine appointments, and my clinic staff and I handed out N95/KN95 masks. I quickly familiarised myself with preventive health guidance issued by the American Lung Association that describes how people can protect themselves from air pollution exposure using the AQI.³ I counselled patients on these recommendations, including, for example, when they should limit or avoid outdoor activities based on their pre-existing health conditions and real time changes in air quality.

Without relevant clinical training and a lack of standardised ambulatory care workflows, however, I felt unequipped to rise fully to the challenge of caring for my patients during this climate disaster. As wildfires are projected to increase in frequency and severity due to the climate crisis, this experience served as an urgent reminder that our healthcare system needs to create new, adaptive models of care that respond to the population's shifting health needs driven by our changing climate.

Opportunities in medical education and beyond

It's encouraging to see that climate health is increasingly being incorporated into medical education.⁴ Previous research, however, has found

that these educational offerings still vary considerably across medical institutions.⁵ The US lacks comprehensive, standardised, and compulsory educational frameworks on climate health in undergraduate, graduate, and continuing medical training. As I and other healthcare providers experienced during the NYC wildfire emergency, this leaves physicians unprepared to meet patients' health needs when a climate crisis occurs.

Beyond medical education, there are additional opportunities to improve the delivery of ambulatory healthcare in response to our changing climate. A growing body of evidence has shown the environmental and health benefits of telemedicine, ranging from its usefulness for patients during extreme climate events to its mitigation of carbon emissions from transport.⁶ One study found that patient familiarity with telemedicine before a wildfire event resulted in a reduction in inpatient and emergency department use for ambulatory care sensitive conditions up to one year after a wildfire.⁷ Telemedicine should be incorporated into health systems' climate preparedness plans to provide vulnerable patients, and providers, with alternative forms of care delivery during natural disasters.

The risks to people's health from climate related hazards often depend on building and neighbourhood level factors. Previous studies have shown, for example, that the majority of a person's exposure to outdoor air pollution from wildfires occurs while they're sheltering indoors and that this can be worsened by suboptimal building design.⁸ Current recommendations from the US Environmental Protection Agency to improve indoor air quality during wildfires include the use of indoor air quality monitors, portable air cleaners, and MERV13+ filters for heating, ventilation, and air conditioning units.⁹ All ambulatory care centres should be retrofitted with these features and serve as clean air spaces during poor air quality events.¹⁰

Screening for climate health risks

Limited funding, and the lack of standard recommendations for assessing the health effects of climate change, also means that I am restricted in my ability to screen patients for climate change related health risks and to connect them to resources. A new rule by the Centers for Medicare and Medicaid Services will soon make it mandatory for certain US hospital systems to implement social determinants of health screening.¹¹ Similar federal policies should be encouraged to incorporate climate health screening as a quality measure in healthcare. Such

funding could be leveraged so that climate related determinants of health are incorporated into screening practices and resources can be allocated to patients.

In the historical absence of strong federal policies that promote climate adaptation and mitigation efforts, many climate justice initiatives in the US are driven by action in local communities. In New York City, there are numerous community based organisations that tackle the climate health needs of their communities. All efforts to improve our healthcare system's response to climate change should employ an intersectional framework that centres the longstanding knowledge and practices of these community led efforts. Doing so will help ensure that the delivery of ambulatory healthcare doesn't reproduce or worsen existing climate health inequities.

Ambulatory health networks, especially federally qualified health centres, are integral to providing preventive care that is tailored to the health needs of a given community. Without standardised training, improved clinical workflows, targeted advocacy, and sustainable funding, we will continue to fail our patients who are most vulnerable to the health effects of climate change. As the frequency of extreme climate events are increasing, now is the time to act.

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