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LETTER TO THE EDITOR

The Time Is Now: Climate Change and Mental Health

Andreea L. Seritan [1] · Ioana Seritan [2]

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To the Editor:
With yet another wildfire raging north of San Francisco, where many of our patients and co-workers live, along with the largest mandatory evacuation in recent memory and planned power outages, a renewed sense of urgency is upon us. Sadly, devastating fires, floods, and landslides have become a common occurrence in California. Around the globe, the number of weather- and climate-related disasters has more than doubled in the past forty years, and their frequency and severity is expected to continue to rise [1]. At the time of this writing, devastating wildfires continue to burn in Australia. These disasters lead to loss of life and property and irreversible ecosystem changes and have serious physical and mental health consequences [2].

We have already seen patients affected by climate-related disasters in our clinics. Many lost their homes, jobs, or both. Population is declining in the areas hardest hit by disasters, with some families deciding not to rebuild their homes and instead relocate elsewhere. Residents of Northern California communities disrupted by the deadly wildfires of 2017 and 2018 painfully relived those experiences with the recent fire in October 2019, reactivating their depressive and posttraumatic stress symptoms. New onset or exacerbation of pre-existing anxiety, depression, posttraumatic stress symptoms, and suicidality have been reported following natural disasters, with symptom burden increasing over time [3, 4]. One year after Hurricane Katrina devastated New Orleans in 2005, the prevalence of posttraumatic stress disorder (PTSD) in a sample of 815 residents of areas affected by the hurricane was 20.9%, compared with 14.9% five to eight months after the disaster; suicidal ideation had risen to 6.4% (vs. 2.8%), and suicide plans increased from 1 to 2.5% [3]. Six months after Hurricane Maria in 2016, two thirds of the residents of Punta Santiago, Puerto Rico, had clinically significant increases in symptoms of generalized anxiety disorder, major depressive disorder, or PTSD [4]. And in states like Texas, Washington, Ohio, California, and New York, where international refugees primarily resettle, it is important to keep in mind that natural disasters can retraumatize people who have already lost their homes and been displaced at least once and have likely experienced traumatic events previously.

In 2018, Coverdale and colleagues advanced a call to action for the psychiatric profession to address this unprecedented public health emergency and outlined specific clinical, administrative, research, and education initiatives (summarized under the acronym CARE) [5]. Public consciousness has sharpened and there is ongoing national dialog on this topic. Yet, the mainstream psychiatric community seems paralyzed by either apathy or anxiety. Perhaps the challenge is so immense and multifaceted that it seems insurmountable, and it is hard to fathom how to prioritize strategies. Or perhaps this is the result of compartmentalization or insufficient knowledge regarding the impact of climate change, until or unless it strikes closer to home. But with stories of our patients narrowly escaping disasters, terrified and helpless, reality can no longer be ignored. It is time for psychiatrists and other health professionals to start taking serious steps to address the mental health consequences of climate change and, more importantly, to work together to prevent natural disasters caused or exacerbated by global warming. It is also important to uphold health equity and environmental justice values, because low-income, minority, or otherwise marginalized communities are disproportionately affected by climate change [2] and have limited access to care, compounding the mental health impact.

Academic psychiatrists can, and should, take individual and collective action to address this challenge. The Department of Psychiatry at University of California, San Francisco, recently launched an interdisciplinary Climate Change and Mental Health Task Force [6], following the structure delineated by Coverdale et al. [5]. An important

✉ Andreea L. Seritan
andreea.seritan@ucsf.edu

[1] University of California San Francisco, San Francisco, CA, USA

[2] International Bird Rescue, Fairfield, CA, USA

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guiding principle was accepting that there are few content experts; many will feel unprepared and experience impostor feelings. Yet, the Herculean task ahead requires that we start designing, evaluating, and disseminating interventions without delay.

Based on our experiences as a psychiatrist and a wildlife rehabilitation technician, we authors build on the existing literature by suggesting specific actions that individuals, academic psychiatry departments, and affiliated healthcare systems can prioritize.

Individually, we can:

- Actively seek to educate ourselves and our colleagues on climate change, disaster preparedness, and how to best help our patients cope with these highly stressful situations;
- Educate patients living in high-risk areas on potential consequences of natural disasters and develop individualized emergency preparedness plans for each patient, including at least a two-week additional medication supply and contact information, should they be displaced;
- Develop or collaborate in the development of curricula focused on the mental health impact of climate change;
- Initiate and support institutional and professional association sustainability initiatives.

Academic psychiatry departments can:

- Ask each lecturer to include at least one relevant teaching point—smaller, incremental changes may be more easily implemented across the undergraduate, graduate, and continuing professional education spectrum;
- Consider instituting a small department tax, such as 0.1% of large research grants or philanthropic support, which could fund some of the departmental initiatives below;
- Support clinical, educational, or research projects in the area of climate change, keeping in mind that faculty members who are already vicariously traumatized by their patients' experiences are at higher risk of burnout, and additional efforts without any allocated resources may have unwanted effects on their own mental health.

Healthcare systems can establish policies aimed at protecting the environment, some of which are already being implemented at the University of California and other institutions, for example:

- Add compost bins in all areas where food is served;
- Incentivize the use of public transportation, carpooling, or biking to work;
- Encourage the use of electric vehicles for business travel;
- Allow employees to work from home and use video conferences and telehealth services whenever possible and appropriate, to minimize travel-related carbon footprint;
- Divest from fossil fuels.

We have a long way to go, and not enough time. A health crisis of this magnitude can only be tackled if we work together. We can no longer afford to be bystanders, hoping that someone else (or another department) will take the lead. And we can no longer compartmentalize, empathizing from a safe distance with patients, families, and communities affected by natural disasters. As Coverdale and colleagues already stated two years ago [6], the time to act is (was) now.

Compliance with Ethical Standards

Disclosures On behalf of both authors, the corresponding author states that there is no conflict of interest.

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