To: The U.S. House Select Committee on the Climate Crisis  
From: The Climate Psychiatry Alliance  
November 20, 2019

The Climate Psychiatry Alliance is a 501(c)3 organization of psychiatrists who work to educate the psychiatric profession and the general public about the profound mental health impacts of climate change. The reach of our organization, through academic and lay presentations, articles, and journal publications, is approximately 4.5 million persons. We are submitting the following comments in response to the U.S. House Select Committee’s Request for Information.

Climate change is considered the greatest health threat of the 21st century, potentially erasing the extraordinary gains in public health of the last century. The World Health Organization estimates a minimum of 150,000 excess deaths a year between 2030 and 2050 due to the “well understood impacts of climate change”. (Lancet, 2015)

Psychological distress from living in a world changed by global warming is only beginning to be appreciated. Living with its losses and existential threats has contributed to emotional states of anger, grief, anxiety, distress, fear, sadness, despair and hopelessness. A new lexicon of “climate anxiety” is developing to name and address these problems. The youth movement has led the way in articulating the acuity of such psychic states.

The devastating mental health consequences are less well known and often overlooked. Research literature on climate mental health makes it clear that climate change will bring a tsunami of psychiatric impacts. Increased suicides from heat and air pollution alone are predicted to wipe out the gains of all existing suicide-prevention programs (Burke et al 2018). Higher temperatures lead to “hot-headedness” and violence, with 3.6 million more violent crimes in the United States predicted by current modeling by 2099 (Ranson, 2014). Higher temperature by itself raises population-wide dysphoria (Obradovich, 2018). Air pollution doubles the risk of autism, cognitive delay and behavioral disorders in children. In adults, it raises rates of bipolar disorder and depression and increases the prevalence of dementia by twenty percent or more (Chen 2015), as much as high blood pressure, diabetes, and other major public health threats.

Climate change brings more extreme weather, refugee crises, and civic conflict. These give rise to post-traumatic stress disorder, anxiety, depression, complicated grief, survivor guilt, substance abuse and suicide. Slower climate related disasters such droughts and sea level weaken infrastructure and disrupt resources for food, water, and housing, causing financial and relationship stress and fragmentation of entire communities. (Hayes, 2018). The indirect impacts of climate change from poor nutrition and infectious diseases that damage the brain will also be great. Children, seniors, low income and marginalized communities are
most vulnerable, particularly communities of color and people with mental illness. These groups will continue to bear the greatest burden of climate-associated mental health impacts.

*The impacts on the US economy from dramatically lower productivity and disability losses associated with these mental symptoms will be profound (Ebis 2018). It is critical that comprehensive efforts to prevent this deterioration of the health and welfare be undertaken.*

**Recommendations Area 1: General Mitigation of Direct Impacts:**

Efforts to reduce dependence on a fossil fuel economy and reduce carbon emissions will lower the incidence of the mental illnesses that they cause directly and have secondary co-benefits for other aspects of health and mental health. Many policy solutions in the area of building, transportation, industry, waste management and carbon pricing, addressed in other testimony before this committee, should be viewed not only as climate change solutions but as public health programs.

For this reason, congressional policy for rapid decarbonization is the best and fastest way to respond to the climate mental health threat. The most effective solutions are not always intuitive, and include refrigerant management, wind turbines, reduced food waste, promotion of a plant-based diet, education of women and family planning, support for restoration of tropical forests, solar farms, and silvopasture (Hawken, 2017). Additionally, therefore, Congress should support strategies to improve public understanding of best-practice interventions.

The Clean Air Act gives the U.S. Environmental Protection Agency (EPA) the authority and responsibility to reduce the emissions that cause climate change because of the threat they pose to human health. The Clean Air Act has resulted in huge health benefits, with low-estimate cost benefit analyses showing health savings of $2 trillion for $65 million spent (EPA, 2016). The successes of the Clean Air Act indicate the significant positive health and cost benefits of strong regulatory policies which are protected by legislation. The extension of the Clean Air Act in the Clean Power Plan is anticipated to save up to $45 billion per year in health costs and should not be repealed. The attached graphic from the IPCC demonstrates the percentage of mental health impact that remains preventable if carbon emissions can be decreased.

All of the policy suggestions that are incorporated in *The US Call to Action on Climate, Health, and Equity: A Policy Action Agenda* (attached) are important mitigation and health actions and should be integrated into Congressional action.

**Recommendations Area 2: Mitigation of Climate Impacts Specific to Mental Health:**

Studies indicate that the majority of Americans are concerned and anxious about climate change. Mastery of relevant knowledge and self-empowerment through effective action can decrease this
psychic distress while also leading to pro-environmental behaviors (ref). Social messaging plays a large role in behavioral change. Therefore, Congress should take steps to improve the public’s psychological approach to climate change and to decrease anxiety about worsening conditions.

We applaud and agree with the recommendations of our colleagues from Health Professionals for a Healthy Climate included below, and offer additional recommendations placed in bold:

A. Consult and collaborate with behavioral health professionals to develop and institute behavioral health interventions and public information programs that decrease carbon-intensive behaviors:
   1. Feature personal and local stories that illustrate the impact of climate change and climate solutions.
   2. Frame the action, consequences of inaction, and solutions as immediate versus long-term.
   3. Appeal to individual values and apply intrinsic motivational strategies versus external rewards.
   4. Use social norms to normalize action and engagement.
   5. Use a stress resilience framework to create interventions, discuss solutions, promote action, and increase engagement with the ongoing stresses.
   6. **Provide funding for trainings that lead to climate behavioral change by government institutions.**

B. Consult and collaborate with behavioral health professionals to institute individual and population-level climate interventions with behavioral health co-benefits:
   1. Create policies that encourage insurance companies to reimburse or decrease premiums for healthy behaviors that have a climate co-benefit (e.g., bike commuting, walking, purchasing local produce, plant-based dietary choices, etc.).
   2. Incentivize “green benefits” for patients and employees within the healthcare sector such the use of telehealth services, green commuting, promotion of staff investments in clean energy, and access to shares of organic produce grown in gardens on hospital grounds, etc.
   3. Provide grants and funding to support green infrastructure such as roofing and garden efforts for both healthcare institutions and private residences. Green space and access to pleasant natural environments offers stress reducing and health promoting benefits. Additionally, green roofs can significantly reduce energy usage and decrease the impact of the urban heat island effect. Green corridors and green health care facilities offer a significant opportunity for providing benefits to patients through additional access to green space.
   4. **Provide tax incentives for the divestment from fossil fuels by institutions and individuals**
5. Consider strong incentives for service by young adults to mitigate climate impacts, such as expansion of Americorps activities that involve reforestation and other environmental recovery. Such activity has the mental health co-benefit of allaying youth climate anxiety through empowering activity.

Recommendations Area 3: Adaptation to Climate Health Impacts:

Psychiatric and psychological impacts of climate change are inevitable. Congress should enact measures to prepare institutions and the public to respond optimally to chronic and acute climate distress.

A. Consult and collaborate with behavioral health professionals to institute individual and population-level interventions to reduce the negative mental health impacts of climate change and related stress:

1. Transform the acute response systems of the CDC, FEMA and public health sector into enduring, sustainable programs that can be rapidly re-initiated and strengthened as repeated crises occur.
2. Increase funding and support to public health departments to expand capacity and planning for response to climate-related mental health needs.
3. Inventory existing federal funding for community preparedness, research future needs based on climate projections, and appropriate funding accordingly.
4. Require that institutions receiving Federal funding for climate work collaborate to maximize efficiency and prevent redundancies.
5. Fund policies that promote public/private partnerships, including with academic institutions, to accelerate the development of programs designed to reduce and treat the mental health impacts of climate disruption.
6. Fund school programs that help teachers and parents address the mental health impacts on children.
7. Fund school programs that promote education on regenerative lifestyles.
8. Increase funding to build an expanded focus on community resilience in community health and mental health systems and preventative strategies.
9. Support development and reimbursement of educational, public health, and civic institutional systems that provide stress-inoculation training in mindfulness, meditation, coping strategies, conflict-resolution and self-care strategies.
10. Make widely available internet and technology strategies such as Calm and PTSD Coach to reach large numbers of people with climate mental health needs.
B. Provide support for the evaluation, regulation, and compliance monitoring of health facilities and insurance companies related to:

1. Adequate clean (carbon-free) emergency back-up power with a focus on on-site, clean and renewable generation (solar, wind, heat capture, etc.) to reduce dependence on vulnerable power grids.
2. **Supplies and staffing for prolonged weather and climate emergencies.**
3. Provision of emergency back-up supplies of medication to patients to be used in unexpected climate disasters.
4. **Staff training for climate and environmental pollution crises.**
5. Facility hardening to withstand weather/climate-related damages.
6. Programs that maintain the availability of electronic health records, electronically stored insurance coverage information, on-line communications between care providers, laboratories, radiologic facilities, and other health care facilities including pharmacies during climate crises.
7. **Public health education on heat stroke, medication use during heat waves, home air conditioners and air filters, and other measures that lessen the morbidity of heat and air pollution during acute events.**

C. In recognition of the heightened vulnerabilities of communities of color and low-income communities, a number of steps should be taken:

1. Support for state health departments to develop carbon-free transportation/evacuation strategy and shelter planning for vulnerable communities. This should include access to cooling centers, coordination with pharmacies to store and provide back-up medications in the event medication supplies are not available due to power failure, floods, etc., and community systems for call-chains, use of healthcare facilities to house and support patients, and welfare checks on the disabled, the isolated elderly, and families with small children during heat, air pollution, and other adverse environmental events.
2. Enhanced support for hospitals/clinics that serve communities of color, indigenous communities, impoverished communities, and communities with higher rates of chronic medical and mental health disorders.
3. Planning and support for the special needs of rural communities to manage climate and pollution-related crises.
4. Planning and support to protect indigenous peoples from climate/pollution related crises including toxic releases into air, water (surface and ground) and on-land. This should include increased support for Indian Health Services, particularly in the areas of mental health and preventive services.

Respectfully submitted,
Elizabeth Haase, MD, DFAPA, on behalf of the Steering Committee
Climate Psychiatry Alliance

References:


These IPCC graphs indicate that currently there is a high potential to mitigate mental health risk if we act rapidly to do so by 2040. Thereafter, irreversible mental health impacts will outstrip other health impacts of climate change.