

Make the climate crisis your own research priority

Scientists and health professionals must commit to preparing for the health effects of climate change through increased research, education and self-assessment.

The year 2019 was the **second warmest** ever reported and closed the warmest decade on record. In 2020, yet again, devastating wildfires have burned millions of acres in Australia and the USA. These signs of destruction may represent the most visible ramifications of the climate crisis, but they represent only the tip of the iceberg. Research has tied greenhouse gas emissions directly and indirectly to numerous health problems, including exacerbation of chronic diseases by heat, spread and distribution of vector-borne infectious diseases, aggravation of respiratory illnesses and food shortages. Last year, the Medical Society Consortium on Climate and Health — a coalition of over 70 medical groups in the USA — released a climate action plan for health. It states that climate change is a “**true public health emergency**,” highlighting the urgent need for action and better understanding of the health costs of the climate crisis. Understandably, right now all eyes are on the response to the ongoing COVID-19 pandemic. But it is crucial that the biomedical community does not lose sight of the urgency of the climate crisis. Researchers and health professionals alike need to step up their commitment with a comprehensive climate agenda. Such commitment must involve not only bringing research on the health effects of climate change to center stage but also educating themselves, reassessing their own carbon footprint, and working toward increasing public awareness and confidence in the science behind it.

Medical trainees are already using **their voices** to demand that their courses address the effects of climate change. Last year, students from medical schools across the USA founded **Medical Students for a Sustainable Future**, in order to acknowledge climate change as a major threat to health and to advocate for better preparation of doctors to handle the health consequences of climate change. The American Medical

Association has also supported the **strengthening** of education centered on climate-sensitive health outcomes at all stages of medical training. Clinicians can use this knowledge and the trust granted to them to educate their patients and the general public about the less immediate and apparent health effects of climate change.

Biomedical researchers, on their end, can begin by asking how the climate crisis may affect the research they are carrying out. For instance, patient intake forms could be modified to include questions aimed at better understanding the potential influences of climate on clinical histories. Clinical studies could take into account economic disparities and could be extended to vulnerable and at-risk populations who may disproportionately suffer from the impact of climate change. Infrastructure should be updated to allow proper data collection, analysis and sharing levels to identify and monitor people and populations most at risk. Trusted community health centers should be brought into this process to better enable longitudinal measurements of local populations.

Finally, researchers must also ensure that they are holding themselves to high standards when it comes to being green. The carbon footprint of translational research can be high due to the reliance on plastic disposables, such as pipette tips, and energy-intensive equipment. New lab spaces and research buildings should actively incorporate green planning into their design, and research proposals and activities should take into account mechanisms for reducing emissions. One obvious opportunity relates to conference travel. A **recent analysis** suggested that three simple actions — selecting venues to minimize travel emissions, improving the virtual conference experience and making conferences biennial — could reduce travel-related carbon emissions by 90%. By adopting approaches

such as these, researchers could demonstrate a genuine commitment to carbon-friendly behavior and lead by example.

In light of the current pandemic and the persistence of climate-change denial and political inaction in some countries, the prospects of addressing the climate crisis and preparing for its effects on health may seem dire. Judge Amy Coney Barrett, the most recent US Supreme Court nominee, who is likely to be confirmed by the time this editorial is published, worrisomely described climate change as “**politically controversial**,” which raises additional concerns about how the composition of the Supreme Court will affect judicial rulings on cases related to climate change, whose impact will be felt globally. International cooperation is key to mitigating the effects of climate change, but the postponement of the 26th session of the United Nations Climate Change Conference (COP26), which was originally scheduled for November 2020, will delay crucial policymaking. Not all hope is lost, however. Many cities have made tremendous strides in embracing green infrastructure and reducing emissions, demonstrating the positive effects of locally centered initiatives. The UK recently **announced** the first sustainability officer for the National Health Service, signaling that climate change must be a priority in health. Researchers must continue to advocate for the consideration of climate change–related health effects in education, research and policy-making, and take stock of approaches to ‘greenify’ research activities more broadly. As the COVID-19 pandemic has shown, lack of preparedness has enormous costs. When it comes to the climate crisis, translational and clinical researchers can play a vital role in ensuring that societies “**build back better**.” □

Published online: 5 November 2020
<https://doi.org/10.1038/s41591-020-1141-8>