**NATIONAL ACADEMIES** *Sciences Engineering Medicine*

New Voices' One Health Webinar Series: Exploring Linkages Among Environmental, Human and Plant Wellbeing

[1st Webinar: Approaches to Justice and Equity-Focused Energy and Climate Change Research](#)

January 31, 2023| 3:00 pm -4:15 pm ET

## Agenda:

**Dr. Hussam Mahmoud: System-of-systems approach for assessing the impact of extreme events on health care networks**

Typical approaches to quantifying infrastructure vulnerability to extreme events have primarily focused on analyzing single/isolated structures. Moreover, frameworks for quantifying the impact of extreme events on healthcare networks still need to be developed. In this presentation, the combined effect of wildfire and the pandemic on a network of hospitals will be investigated using a newly developed socio-physical framework. Wildfire data is combined with varying courses of COVID-19 spread to evaluate the effectiveness of different strategies for managing patient demand. The proposed model is then used to assess viable mitigation strategies and optimize resource allocation to improve patient outcomes under the combined hazards.

**Dr. Omar Isaac Asensio: Using ML/AI to address distributive equity in green energy transitions**

For the first time in four decades, US emissions from the transportation sector exceed those from the electric power sector. In the context of COP27 and zero emissions vehicles policies, there is an urgent need to address consumer barriers to sustainable transportation, including affordability and equitable access to emerging infrastructure. In this talk, we will discuss the use of AI in green energy transitions with a focus on identifying distributive equity issues in emerging transportation.

**Dr. Elena Krieger: Developing health, equity, and resilience metrics for clean energy and decarbonization strategies**

Decarbonization strategies frequently consider co-benefits such as public health, energy equity, and resilience as an afterthought if at all. Here, we discuss how metrics such as cumulative pollution burdens, energy affordability, and demographics can be integrated into climate and energy policies up front to help ensure that these co-benefits are realized. Case studies will include examples of co-leading research with community partners to better reflect on-the-ground priorities and needs.

**Panel discussion moderated by Dr. Darshan Karwat followed by Q and A**