**AIRLEAP Virtual Sessions at a 2022 SGE Virtual Webinar**
**January 28, 2022, 12:00 – 2:00 pm EST.**

**Free Registration:** Register in advance at this Zoom link.

**Session Title:** New Developments in Health Economics in the Pandemic Era

**Session Description:**
This session explores a range of important, applied, and real-world issues in health economics, which are particularly today, in the pandemic era. All of these papers explore the best methods in health economics, especially in the context of the promotion of scientific integrity in economics. The first paper, by Professor Puaschunder, studies "COVID-19 Long Haulers: Democratization of Healthcare Information and the Economics of Prevention, eHealth and Rest," which is especially timely. The second paper, "Assessing Communication and Compassion Fatigue in Health Care: A Case Study of Treating Amyotrophic Lateral Sclerosis (ALS)," by Professors Danowski and Dwyer, focuses in on the well-being of the health care provider who is at risk of compassion fatigue (CF) given the nature of the care they provide. Professors Sloboda and Sussan then explore "Improving Statistical Inference in Health Economics" which examines the relative importance of statistically significant findings in guiding healthcare policy decisions. Finally, Dr. Kichkha presents a paper on "Exploring Social Bias Inherent in Health Data" which has important, applied policy implications as well, in enabling health services to be more efficient and successful.

**Session Chair:** Seth H. Giertz, seth.giertz@utdallas.edu The University of Texas at Dallas

**Session Organizer:** Areerat Kichkha, areerat.kichkha@airleap.org, AIRLEAP

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**Paper #1**

**Paper Title:** COVID-19 Long Haulers: Democratization of Healthcare Information and the Economics of Prevention, eHealth and Rest

**Presenter:** Julia M. Puaschunder, Julia.Puaschunder@columbia.edu, Columbia University

**Abstract:**
The COVID-19 pandemic, which started at the end of 2019, has been spreading around the world for over a year by now and no clear end is foreseeable yet. While vaccination and medication opportunities to cure the disease have improved impressively and steadily, around 10 to over 30% of previously COVID-infected are estimated to become suffering from long-haul symptoms. Demographically, estimations account for the potential of a 0.3-1.659 billion Long Haulers strong cohort comprised of around 30–40-year-old at infection facing waves of recurrent symptoms of fatigue, headaches, and breathing problems as well as a set of debilitating memory fog, electrolyte imbalances, skin and gum problems alongside emotional distress. While the causes and long-term lasting effects are unclear and to be investigated in the future, in the democratization of healthcare information, social online media have turned to cheap and easily accessible information portals that offer quick remedies and information exchange of the masses on newly emerging phenomena. Other foreseeable trends in light of generation Long Haulers, who face recurrent waves of debilitating symptoms and chronic illnesses, include

preventive care self-measurement of health statuses in real-time but also the use of big data insights about virus spreads. Further, a heterodox economics case of attention to health, minimization, and rest in business, finance, and economics will likely emerge foremost driven by behavioral economics, which started to address cognitive overload and decision-making failures in a too complex world. In all these trends of attention to health, minimalism, and rest, the COVID-19 Long Haulers generation has to potential to reboot economics and allow for an integration of Artificial Intelligence (AI) to learn how to fill gaps of chronically or recurrently ill to assist us all in a phase of common rest and recovery.

**Discussant:** John Mullahy, jmullahy@wisc.edu, University of Wisconsin-Madison

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**Paper #2**

**Paper Title:** Assessing Communication and Compassion Fatigue in Health Care: A Case Study of Treating Amyotrophic Lateral Sclerosis (ALS)

**Presenter:** Debra Sabatini Dwyer, dwyerd@farmingdale.edu, Farmingdale State College

**Additional Authors:** Lorraine Danowski, lorraine.danowski.1@stonybrookmedicine.edu, Stony Brook University

**Abstract:**
Treating patients with severely debilitating and potentially terminal conditions is exhausting for the patient, their family and personal caregivers, and for the treating team of medical personnel. Typically, formal medical care involves a team of suppliers of health care, whether they practice as a coordinated team or not. The team concept in medicine has attracted attention with its emphasis on patient-centered and efficient quality care. Gaps in the literature of how to categorize and define team approaches remain and overall knowledge of team function proves to be an important consideration in cost-effectiveness and efficiency studies. The purpose of this work is to focus in on the well-being of the health care provider who is at risk of compassion fatigue (CF) given the nature of the care they provide. With the COVID-19 pandemic, this has become at the forefront of concerns given not only the physical distress placed on the team of caregivers, but the emotional as well. Using a sample of clinics treating patients with Amyotrophic Lateral Sclerosis (ALS), we examine approaches for team delivery of services on CF outcomes within and across health care disciplines. Using a survey design, approximately 110 ALS clinics in the United States were invited to participate. The contents of the survey included attributes of the clinic/team and validated indices of team effectiveness such as relational coordination (RC) as well as a score for our variable of interest (CF). Our findings show that multidisciplinary teams are significantly less likely to experience Compassion Burnout (BO) or Secondary Traumatic Stress (STS) two components of the CF scale, compared to hybrid teams. Despite focus on the interdisciplinary team model, multidisciplinary teams have a central governance structure that may be needed for team work to be successful in this setting. The social work discipline is at greater risk of CF and may require periodic reassessment of CF to remain a productive team member. During a time when health care workforce shortages have grown significantly as a consequence of an ongoing pandemic, implementing strategies for promoting the well-being of these precious resources is important.

**Discussant:** Steven Payson, spayson@umd.edu, University of Maryland

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**Paper #3**

**Paper Title:** Improving Statistical Inference in Health Economics

**Presenter:** Brian W. Sloboda, bsloboda@email.phoenix.edu, University of Phoenix

**Additional Authors:** Fiona Sussan, sussan@toyo.jp, Tokyo University, Japan

**Abstract:**
In health economics, statistical parameters are used to answer the fundamental question: How strongly does the evidence favor the alternative hypothesis relative to the null hypothesis? However, the summary statistics employed do not directly answer this question and are often misinterpreted in ways that lead to overstating the evidence against the null hypothesis. Despite the advocacy for not resorting to the derived statistical significance levels to answer questions in economic research, these significance levels may continue to be widely reported and used to assess the strength of evidence. These significance levels may reveal little about the strength of the evidence, despite such levels becoming the most influential means through which work in health economics becomes published in top journals. In contrast, what health economists should be most concerned about, is whether their hypothesis is true, and if so, how strong this finding is. The objective of this paper is to provide a brief background of the dependency on statistically significant findings in health economics, and its implications for the field.

**Discussant:** Rolando Santos, rsantos@lakelandcc.edu, Lakeland Community College

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**Paper #4**

**Paper Title:** Exploring Social Bias Inherent in Health Data

**Presenter:** Areerat Kichkha, areerat.kichkha@airleap.org, AIRLEAP

**Abstract:**
This paper explores the social bias inherent in health data using a case study of predicting whether incoming Intensive Care Units patients, lacking verified medical histories, are diabetics. Reflecting on clinical usage, we reduced the number of features by focusing on features that are data-rich and patient-centered, filtering through exploratory data analysis, public information, and knowledge of domain experts. A sample is formulated by random sampling of the population to produce equal amounts of diabetic and non-diabetic data and encoding “gender” and “ethnicity” in the training dataset. Selected machine learning models were deployed to seek a balance between predictability and interpretability for social impact implications. Implementation of results may assist with informed clinical decisions about patient care to improve patient outcomes and the economic efficiency through which health services are delivered.

**Discussant:** Amelie Constant, ameliec@princeton.edu, Princeton University

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