

## Department of Mathematics and Statistics Colloquium

### *ANOVA or Artificial Intelligence and Machine Learning? Applications in Healthcare Management*

**Nawar Shara**

**Medstar Health Research Institute**

**Abstract:** Use of social media and other forms of digital engagement between patients and providers is becoming more prevalent for care coordination and management in healthcare. Voice activated and visual animated technology (e.g. Amazon's Echo Dot; AVATARS) can be programmed with additional enhancements over their baseline/native functions. These technologies have the potential to empower patients to better engage and manage their own health by: (1) setting medication or wellness reminders, (2) offering real time access to information, and (3) enabling patients with similar diagnoses to interact with one another. Artificial intelligent enabled, internet connected devices are poised to have profound impacts on the quality of life for in-home, independent, and assisted-living patients by vastly increasing the connectivity to family and healthcare providers.

This study aimed at testing the effectiveness of these smart technologies coupled with the availability of patient-level data from EHR which will allow us to create a truly customized, interactive, and automated personal healthcare assistant.

**Speaker Bio:** Nawar Shara, PhD, is the Director of MHRI's department of Biostatistics and Biomedical Informatics, Associate Professor of Endocrinology at Georgetown University's School of Medicine and the Director of the Biostatistics, Epidemiology and Research Design (BERD) Core for the Georgetown/Howard Universities Clinical and Translational Science Center (GHUCCTS). Dr. Shara's research focus includes Big Data solutions, Artificial Intelligence, Machine Learning, data visualization, Predictive Analytics, Adaptive Designs and Optimization schemes in clinical trials.

**Monday, October 19<sup>th</sup> at 3:10pm via Zoom**