

Title: Impacting Policy Through Computational Approaches

Abstract:

Access to healthcare and health information is of major global concern. The stark inequality in the availability of health data by country, demographic groups, and socioeconomic status impedes the identification of major public health concerns and implementation of effective health policy. A key challenge is understanding health information needs of under-served and marginalized communities. Without understanding people's everyday needs, concerns, and misconceptions, health organizations lack the ability to effectively target education and programming efforts.

In this presentation, we focus on the lack of comprehensive, high-quality data about information needs of individuals in developing nations. We propose an approach that uses search data to uncover health information needs of individuals in all 54 nations in Africa. We analyze Bing searches related to HIV/AIDS, malaria, and tuberculosis; these searches reveal diverse health information needs that vary by demographic groups and geographic regions. We also shed light on discrepancies in the quality of content returned by search engines and discuss potential for using computationally-informed interventions to improve access to health information.

In the last part of the talk, we explore how to use a mix of techniques from algorithm and mechanism design as well as computational social science, along with insights from other disciplines, to inform policy in health and other domains and the Mechanism Design for Social Good initiative -- a vibrant and growing community of researchers and practitioners working towards improving access to opportunity for historically under-served and marginalized communities.

This talk is based on joint work with Kira Goldner, Shawndra Hill, Irene Lo, H. Andrew Schwartz, Peter M. Small, and Jennifer Wortman Vaughan.