Biomedical Informatics Grand Rounds

Wednesday, April 2, 2025
3:00 pm – 4:00 pm

Using Machine Learning and GIS Mapping to Guide Responsible Gambling Strategies and Service Delivery in New Jersey

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Remote Access
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Bio: Lia Nower, J.D., Ph.D., is a Distinguished Professor, Associate Dean for Research, and Director of the Center for Gambling Studies at Rutgers University. A clinician and attorney, her research focuses on big data analysis and machine learning models for online gambling and sports wagering; gambling and video gaming among emerging adults; policy initiatives around harm reduction and responsible gambling, and etiology and treatment of problem gambling. Dr. Nower serves as a senior editor for Addiction. She has received both the Research (2019) and the Lifetime Research Award (2022) from the National Council on Problem Gambling and the Board of Trustees Award for Research (2022) from Rutgers University.

Abstract: The recent expansion of online sport wagering and igaming has led to higher rates of problem gambling, particularly among emerging adults and other population subgroups. The Center for Gambling Studies (CGS) at the Rutgers University, School of Social Work, is using big data analysis, machine learning and GIS mapping to identify geographic locations with populations most at risk to guide the development of targeted interventions. This presentation will review the GIS StoryMap for the State of New Jersey, including a blueprint for the highest risk target service areas in the state. It will also present findings from a machine learning model that identifies the key risk factors for high-intensity online casino bettors. Implications for prevention, treatment and policy initiatives will be discussed.

Educational Objectives:
1. To explore the key sociodemographic variables that intersect with gambling availability and behavior to inform high-risk geographic target areas for services.
2. To identify and evaluate predictive indicators for high-intensity gambling in online gambling populations.
3. To understand the policy implications of using technology to inform advancements in regulation and service delivery.

Disclosure Statement: The faculty and planners have no relevant financial relationship with ineligible companies, whose primary business is producing, marketing, selling, reselling, or distributing health care products used by or on patients.

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