Name: Genevieve Dash
PI Name: Danielle Dick
Email: genevieve.dash@rutgers.edu
PI Email: danielle.m.dick@rutgers.edu

Implementation of a Genetically-Informed Personalized Feedback Intervention

Genevieve F. Dash, Holly Poore, Emily Balcke and Danielle M. Dick

Department of Psychiatry, Robert Wood Johnson Medical School, Rutgers University
Rutgers Addiction Research Center, Brain Health Institute, Rutgers University

Rates of substance use disorder (SUD) treatment receipt in the US are extremely low (14.6%), and most people do not receive services until their problems become severe. Advances in identification of phenotypic and genomic risk factors for SUDs can help identify at-risk individuals, potentially preventing problems before they escalate; however, these discoveries have yet to be integrated into clinical practice. To address this, our team developed the Comprehensive Addiction Risk Evaluation System (CARES), a freestanding platform that provides personalized information about individual risk for SUD based on behavioral and environmental risk factors known to robustly predict SUD, as well as genome-wide polygenic risk. CARES also screens for current substance use and connects participants to treatment resources if responses indicate hazardous use. CARES thus aims to prevent the development of problems in high-risk individuals and/or facilitate earlier intervention before problems escalate. Our team is conducting an ongoing implementation study to evaluate the use of CARES in medical settings. Qualitative interviews with stakeholders have generated themes of 1) the potential of genetic feedback to enhance early prevention and intervention efforts, 2) how genetic feedback is uniquely poised to mitigate internalized stigma around SUD, and 3) the freestanding nature of CARES reducing both provider burden and patient barriers to reporting substance use. The primary challenge identified was covering costs of the platform and associated genotyping. Demonstrating feasibility and acceptability of a genetically-informed program is a significant step in realizing the translational potential of psychiatric genomics research and moving toward precision medicine for SUD.