

Title: Controlled Substance Designation and Medical Substitution: Evidence from Gabapentin Monitoring and Upscheduling

Abstract: A key concern in U.S. substance use policy is whether supply-side controls can effectively reduce inappropriate prescribing and associated harms, without leading to substitution towards more dangerous substances. Gabapentin, a prescription anticonvulsant approved for nerve pain and seizures, is increasingly used off-label for conditions like postoperative pain, alcohol withdrawal, and anxiety. However, mounting evidence of gabapentin misuse and related harms, particularly when combined with opioids, has led several U.S. states to classify it as a Schedule V controlled substance under the Controlled Substances Act (CSA) and to mandate its prescription monitoring through state prescription drug monitoring programs (PDMPs). This study evaluates the impact of tighter prescribing controls on gabapentin following its controlled substance designation, focusing on misuse and related harms in states that adopted this policy. Using a novel, comprehensive dataset that integrates National Vital Statistics multiple cause of death certificate records, proprietary MarketScan claims data, Medicaid SDUD data, and Medicare Part D data—we employ a staggered difference-in-differences framework to assess the policy’s effects. We find that classifying gabapentin as a *drug of concern*, which entails inclusion in PDMPs but does not restrict prescribing, had little to no impact on prescribing rates. In contrast, Schedule V classification, which introduces stricter controls and documentation requirements, resulted in a sustained and statistically significant reduction in the share of patients receiving gabapentin prescriptions. We find limited evidence of clinically concerning substitution behavior in treatment. There is no detectable increase in prescribing of opioids, and co-prescribing of gabapentin and opioids declines following scheduling.

Short Bio: I am a Postdoctoral Research Fellow in health economics at Indiana University, jointly appointed in the O’Neill School of Public and Environmental Affairs and the School of Medicine’s Division of Adolescent Medicine, under the mentorship of Drs. Kosali Simon and Matthew Aalsma. I received my PhD in Economics from the University of Hawai’i at Mānoa in 2024. I am an applied microeconomist whose research examines how health and social policies influence substance use, behavioral health, reproductive health, and population well-being. My work applies quasi-experimental econometric methods to large administrative and survey datasets to generate evidence on how incentives, regulation, and public programs affect individual and institutional behavior. Across projects, I aim to advance both academic understanding and practical policymaking by identifying how policy design and context shape real-world outcomes.