Throughout the COVID-19 pandemic, researchers have struggled to predict the start and end of waves of infection ("derivative changes"). Leveraging technical analysis methods from finance, we propose an approach for early identification of derivative changes. We evaluate its performance characteristics and explore implications for early response to COVID-19 surges.

Dr. Bilinski is the Peterson Family Assistant Professor of Health Policy at Brown University School of Public Health in the Departments of Health Services, Policy, and Practice & Biostatistics. Her research focuses on developing novel methods for policy evaluation and applying these to identify interventions that most efficiently improve population health and well-being. Dr. Bilinski’s methodological interests include advancing data-driven approaches to observational causal inference, improving causal identification and interpretability in high-dimensional simulation models, and incorporating both cost-effectiveness and affordability into health care decision-making. She studies a range of policy areas, including health insurance reform, gaps in equitable and comprehensive access to dental care, and infectious disease management. During the COVID-19 pandemic, Dr. Bilinski worked with policymakers and researchers on modeling population contact tracing and mitigation of SARS-CoV2 transmission in K-12 schools. Outside of research, she enjoys powerlifting, hiking, and breadmaking.