METHODS BRIEF

Evaluating Problem Solving Courts as a Public Health Intervention to Prevent Opioid Overdose

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Introduction

Like much of the nation, Indiana is in the midst of an opioid epidemic. Laws, including those that govern incarceration and pre-trial diversion strategies, are foundational to public health. Law enforcement, correctional facilities, and the judicial system are agents in the public health system and partners in the public health community. Courts can play a pivotal role in advancing public health, but research indicating their effectiveness in preventing poor health outcomes is scarce.

Study Design and Methods

Funded by the CDC, the purpose of the research grant is to rigorously evaluate strategies to prevent overdose events involving prescription and/or illicit opioids. A problem solving court (PSC) is a public health intervention that refers individuals arrested for drug misuse to treatment as a pre-trial diversion strategy. This study uses a mixed methods design to evaluate individual characteristics of PSC and correctional facility policies, procedures, and practices to identify their impact on morbidity and mortality rates. Study jurisdictions include 30 Indiana counties that host 57 PSCs, and 14 counties where Indiana's 17 correctional facilities are located. Individuals sentenced for drug misuse in Indiana from January 1, 2018-June 30, 2021 will be followed.

Aim 1. Quantitatively code policies, procedures, and practices of PSCs and correctional facilities. Legal datasets will be created by coding (1) sentencing records, (2) PSC and prison protocols, and (3) qualitative interviews of PSC judges and team members, assistant wardens and correctional facility personnel, and representatives of organizations that provide treatment to individuals sentenced for drug misuse.

Aim 2. Analyze the effect of PSC and correctional facility policies, procedures, and practices on drug-related morbidity and mortality. Indiana's Management Performance Hub (MPH) has linked multiple state-held data sources into a central repository. The legal datasets will be linked with those housed at MPH including arrest, correctional facility, EMS, emergency department, inpatient hospitalization, and death datasets. Individuals will be followed at 2 week, 4 week, 6 month, and 1 year post-release intervals. Descriptive analyses on all study variables will be conducted and outcomes among the cohort evaluated using difference-in-difference and time-to-event analysis.

Aim 3. Integrate impactful protocols revealed from Aims 1 and 2 into an agent based model. State transition models are commonly used to simulate the "natural history" of disease progression; however, the use of modeling has been limited in the opioid epidemic because of variability in laws and policies. This study uses an agent based model to (1) reconstruct the natural history of opioid events without impactful interventions, and (2) simulate the impact of the introduction of interventions in jurisdictions in which they previously were not utilized.

Challenges and Opportunities

Challenge. The study was designed to first evaluate PSC policies, procedures, and practices; however, our collaboration with the Indiana Office of Court Services (IOCS), the organization which oversees PSCs, was suspended for over 6 months because of the pandemic. This challenge was overcome by shifting the study focus to correctional facilities. Our study should conclude as originally planned.

Challenge. Each dataset housed at MPH is controlled by a different agency including the Indiana State Department of Health, Indiana Department of Correction, and Indiana Department of Homeland Security. The sentencing data regulated by IOCS is privileged. Authorization to access data dictionaries and PSC data had to be obtained from each individual agency. This challenge was overcome by the successful building of collaborative relationships with each agency.

Opportunity. A codebook was developed collaboratively by the legal, biostatistical, and evaluation teams. It will be publicly available to advance the research of other legal epidemiologists.

Discussion Questions

- Do you have any ideas for future research opportunities related to your project, for example looking at juvenile courts?
- How do you plan to disseminate your findings and the tools developed?
- How does your research team plan to evaluate and/or address the impact of the COVID pandemic on the PSC and correctional facility interventions and morbidity and mortality outcomes mentioned?