ASPPH Presents Webinar Series


Wednesday, March 29, 2017
12:00 pm-1:00 pm Eastern

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Fax: (202) 296-1252
Method for Submitting Questions

Join the Conversation...

• You can ask questions in writing anytime during the webinar.

• Simply type them in the “Questions” field on the right side of your screen.

ASPPH Presents WEBINAR
Moderator

Jennifer Ibrahim, PhD
Temple University College of Public Health
Today’s Presenters

Scott Burris, JD  
Temple University Beasley School of Law, Center for Public Health Law Research

Lindsay Cloud, JD  
Temple University Beasley School of Law, Center for Public Health Law Research

Bryce Pardo  
University of Maryland, School of Public Policy
Presenters

Scott Burris, JD
Temple University Beasley School of Law, Center for Public Health Law Research

Lindsay Cloud, JD
Temple University Beasley School of Law, Center for Public Health Law Research
Scott Burris, JD
Center for Public Health Law Research
Temple University
We all know law has done some great things for health.
But we weren’t really thinking about exactly *how* that was happening.
The RWJF Public Health Law Research Program

“The scientific study of the relation of law and legal practices to population health.”
Public Health Law is not just for lawyers
“Five Essential Public Health Law Services”

Access to Evidence and Expertise
Expertise in Designing Legal Solutions
Help Engaging Communities and Building Political Will
Support for Enforcing and Defending Legal Solutions
Policy Surveillance and Evaluation

Better Health Faster
Policy Surveillance as a Public Health Practice
Policy Surveillance as a Public Health Practice

The systematic collection and analysis of laws of public health significance

- Creates legal data for evaluation
- Builds and supports workforce legal capacity
- Allows stakeholders to track progress
- Supports diffusion of innovation
Add New Technology: The LawAtlas Site and the Workbench
The MonQcle™ System
NIDA’s Drug Abuse Policy Resources

PDAPS | Prescription Drug Abuse Policy System

A source of rigorous legal data for researchers and detailed policy information for the public.

PDAPS is funded by the National Institute on Drug Abuse to track key state laws related to prescription drug abuse. Click on any topic area to reach an interactive page where you can investigate the history and features of the law, or download data and other documentation for research.

**Expanded Access to Naloxone**
State laws authorizing third-party prescribing and lay administration of the standard antidote to opioid overdose.

**Medical Marijuana**
State laws and regulations governing the production, transport, sale, quality and consumption of marijuana for therapeutic purposes.

**Good Samaritan 911 Immunity**
State laws providing protection from criminal sanctions to overdose victims or witnesses who seek emergency services.

**Prescription Drug Monitoring Program**
State laws and regulations governing the operation and use of programs tracking prescription and dispensing of controlled substances.
DAPS (Drug Abuse Policy System)

Rigorous legal data for researchers and detailed policy information for the public.

DAPS is funded by the National Institute on Drug Abuse to track key state laws related to drug abuse. Click on any topic area to investigate the history and features of the law, and download data and documentation for research.

Latest topics

Medication-Assisted Treatment with Methadone (MAT) Laws
Medication-Assisted Treatment (MAT) uses medications, such as Methadone, in conjunction with behavioral therapy and counseling to treat opioid addiction.

Drugged Driving Laws
As more states have legalized medicinal and recreational marijuana and with the high prevalence of prescription drug use in the United States, drugged driving has become a public health issue.

Recreational Marijuana Laws
Alaska, California, Colorado, the District of Columbia, Maine, Massachusetts, Nevada, Oregon, and Washington, have enacted laws that legalize marijuana use for recreational purposes.
World Policy Analysis Center
CDC STATE System

State Tobacco Activities Tracking and Evaluation (STATE) System

Interactive Maps

Access key data from across the STATE System presented in a US map with a corresponding data table below. Select from the list of available topics to link to the Interactive Map.

Cessation Coverage

Survey Data - Tobacco Use
Lindsay Cloud, JD
Center for Public Health Law Research
Temple University
What makes Policy Surveillance a Scientific Approach to Collecting and Analyzing Laws?

- It uses a systematic approach
- It emphasizes transparency
- The process is replicable
- There is a focus on delivering a highly accurate product through quality control
An Overview - Policy Surveillance Process

- Defining the scope
- Conducting background research
- Developing coding questions
- Collecting the law and creating the legal text
- Coding the law
- Publication and dissemination
- Tracking and updating the law
- Quality control
Scoping - identify the topic and parameters of your project
Conducting Background Research

Investigate the legal landscape

Identify key elements of the law and variation

Define preliminary constructs
Developing Coding Questions

1. Review law and secondary sources
2. Finalize list of constructs
3. Develop response set
4. Convert constructs into questions
5. Capture unexpected responses through iterative coding
Collecting the Law and Creating the Legal Text

**Collecting the law** - researchers gather important information about laws relevant to the topic being studied in each jurisdiction included in the project.

The **legal text** is the organized version of the relevant law for each jurisdiction.

- It will be used for coding
- Can be displayed if the dataset is published on LawAtlas.org
Coding the Law

Codeding the law - use the legal text collected to answer the questions developed

The goal of coding is to **observe**, and **record** the relevant features of law, rather than interpret the law.

<table>
<thead>
<tr>
<th></th>
<th>Definitions</th>
<th>Example</th>
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<tbody>
<tr>
<td>Observation</td>
<td>Things we measure (facts)</td>
<td>Does the jurisdiction have a texting while driving law?</td>
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<tr>
<td>Interpretation</td>
<td>Conclusions we derive from those observations (opinions)</td>
<td>Does the jurisdiction have a <em>strict</em> texting while driving law?</td>
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</table>
Quality Control

Researcher 1

Researcher 2

Research/Code

R1 divergences

Identical responses

R2 divergences
Research protocol

The Research Protocol outlines the entire methodology and process of the project, including:

- The scope of the project, including dates of the project, team involved, jurisdictions, purpose of the project, and variables
- Data collection methods, including search strategy and databases used
- Coding methods, including coding scheme and definitions of terms of art
- Description of quality control measures
Publication and Dissemination

**Publishing your project** - release the coded questions and responses (legal data) to the intended audiences

**Disseminating your project** - make users aware the project is available and provide access to the project
Creating data for evaluation

<table>
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<th>D</th>
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</table>
Codebook

A **Codebook** is a document that defines the variables and values included in the project.

Used in conjunction with the data page to perform analysis or to aid in understanding the research and coding.
Tracking and Updating the Law

**Tracking and updating the law** - check periodically for new laws, or updates to existing laws, included in the project to maintain the dataset
LawAtlas.org

LawAtlas.org is a central place for creating, sharing, and accessing authoritative health policy surveillance and related resources.

Learn policy surveillance methods

Access empirical legal data

Learn more about public health laws and policies through related resources
Questions or Comments?

Join the Conversation...

[Enter a question for staff]

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Webinar ID: 761-205-082

GoToWebinar
Presenter

Bryce Pardo
University of Maryland,
School of Public Policy
DO MORE ROBUST PRESCRIPTION DRUG MONITORING PROGRAMS REDUCE PRESCRIPTION OPIOID OVERDOSE?

Bryce Pardo
University of Maryland
Use of legal data in public health research

Background
Problem

US Overdose death rate 1999-2015

Overdose rate per 100,000

Year


All opioids  Heroin  Methadone  Prescription opioids (semi-synthetic)  Synthetic opioids
Prescription Monitoring Programs (PMPs)

- PMPs are state-based data systems that collect information directly from pharmacies on controlled substances prescribed by medical professionals and dispensaries.

- Intended to aid prescribers and law enforcement to support legitimate use of controlled substances, limiting diversion and doctor shopping.
Analytical Challenges


Average death rate by year for states with and without PMPs

<table>
<thead>
<tr>
<th>State-year PMP</th>
<th>N</th>
<th>OPR overdose death rate per 100,000 persons</th>
<th>Standard error</th>
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<tbody>
<tr>
<td>No PMP</td>
<td>396</td>
<td>3.49</td>
<td>.12</td>
</tr>
<tr>
<td>With PMP</td>
<td>420</td>
<td>5.71</td>
<td>.19</td>
</tr>
<tr>
<td>DF</td>
<td>691</td>
<td>P-value</td>
<td>&lt;.001</td>
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</table>
Research Questions

1. Are more robust prescription drug monitoring programs negatively associated with lower opioid overdose deaths?

2. Is there a “tipping point” or minimum standard with which a prescription drug monitoring program is sufficiently strong?

3. Are different administering agencies associated differently with overdose deaths?
Methods
Legal index

- Can measure regulatory changes across states and over time.
- More precise measure of policy and law.
- Departs from use of binary variables in regressions.
- Limitations remain.
Law Atlas/PDAPS

- Useful for researchers who are not legal scholars.
- Helpful to see measure policies over time.
- Can download data sets (PDAPS)
- Evolving field and data source.
Data

- **Dependent variable**: age-adjusted opioid overdose death rates by state (51) and year (16) (CDC WONDER)
  - Total of 816 observations
  - Imputed for censored values (33) to keep highly balanced panel

- **Independent variables**: number and type of PMP regulations in place for each state by year (NAMSDL, PDAPS), access to naloxone/good Samaritan laws, other demographic controls.

- **Explanatory variable**: Created an index variable, *score*, to score PMPs and avoid multicollinearity, reduce measurement error.
Method - Index variable: PMP Score

- Adopted hierarchy from literature reviews and meta-analyses.
  - Brandeis University’s PDMP Center of Excellence (2012 report), meta-analysis (Haegerich et al., 2014) and other studies.

## Research Hierarchy

<table>
<thead>
<tr>
<th>Published or formally documented studies or consensus statements</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Randomized controlled trial (RCT) or meta-analysis</td>
<td>5</td>
</tr>
<tr>
<td>2) Observational study with comparison groups</td>
<td>4</td>
</tr>
<tr>
<td>3) Observational study without comparison group; Time series</td>
<td>3</td>
</tr>
<tr>
<td>4) Case study or written documentation of expert opinion</td>
<td>2</td>
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<tr>
<td>5) Accumulated experience and/or key stakeholder perceptions</td>
<td>1</td>
</tr>
<tr>
<td>Statutory regulation or best practice</td>
<td>Outcomes listed from literature</td>
</tr>
<tr>
<td>--------------------------------------</td>
<td>---------------------------------</td>
</tr>
<tr>
<td><strong>1</strong> Monitor more than Schedule II drugs (Schedules III, IV or V)</td>
<td>Reduced doctor shopping, decreased inappropriate OPR use</td>
</tr>
<tr>
<td><strong>2</strong> PDMP permitted or required (i.e. proactive) to identify suspicious prescribing, dispensing or purchasing activity</td>
<td>Decreased prescription sales</td>
</tr>
<tr>
<td><strong>3</strong> Access for law enforcement and prosecutors</td>
<td>None</td>
</tr>
<tr>
<td><strong>4</strong> Access for Physicians, Pharmacists, NP/PA, Dentists, Chiropractors</td>
<td>None</td>
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<tr>
<td><strong>5</strong> Reporting frequency</td>
<td>Decreased doctor shopping, increase use of program by prescribers.</td>
</tr>
<tr>
<td><strong>6</strong> Prescribers required to check PMP before prescribing to a patient</td>
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<tr>
<td><strong>7</strong> PMP permitted to share data with other states</td>
<td>None</td>
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<tr>
<td><strong>8</strong> Law requires program evaluation</td>
<td>None</td>
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<tr>
<td><strong>9</strong> PMP has oversight board</td>
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<tr>
<td><strong>10</strong> Data retention</td>
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<tr>
<td><strong>11</strong> Funding mechanism</td>
<td>None</td>
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</table>

- 0 no funding
- 1 grants or gifts
- 2 charging fees
- 3 appropriated
PMP Score

- Total possible score of 23.
- Throughout series: range: 0 to 21; mean of 5.19

Figure 2: Score of Prescription Monitoring Programs

Note: Number of states with operational PMPs denoted by n.
Results and Discussion


**Results**

- **Dependent variable:** log of death rate, range of -1.6 to 3.38, mean of 1.25.

<table>
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<tr>
<th>variable</th>
<th>All Observations n=816</th>
<th>No PMP n=396</th>
<th>PMP Operational n=420</th>
<th>Correlation with OPR Overdose Rates</th>
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<td>mean sd</td>
<td>mean sd</td>
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### Results

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<td>Scoreᵃ (class)</td>
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<td>-0.20** [-0.36, -0.03]</td>
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<tr>
<td>2nd quartile</td>
<td>0.041 [-0.1, 0.18]</td>
<td>-0.19* [-0.39, -0.012]</td>
</tr>
<tr>
<td>3rd quartile</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4th quartile</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Agencyᵇ</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Law Enforcement</td>
<td>-0.32*** [-0.46, -0.18]</td>
<td></td>
</tr>
<tr>
<td>Department of Health</td>
<td>-0.036 [-0.20, 0.12]</td>
<td></td>
</tr>
<tr>
<td>Consumer Protection</td>
<td>-0.06 [-0.28, 0.16]</td>
<td></td>
</tr>
<tr>
<td>Professional and licensing</td>
<td>0.086 [-0.1, 0.27]</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>0.18 [-0.02, 0.37]</td>
<td></td>
</tr>
<tr>
<td>Naloxone</td>
<td>-0.04 [-0.23, 0.15]</td>
<td>0.002 [-0.17, 0.17]</td>
</tr>
<tr>
<td>Good Samaritan Laws</td>
<td>0.06 [-0.18, 0.3]</td>
<td>0.03 [-0.19, 0.24]</td>
</tr>
<tr>
<td>Pain Clinic Laws</td>
<td>-0.11 [-0.32, 0.1]</td>
<td>-0.10 [-0.33, 0.13]</td>
</tr>
<tr>
<td>Med. Marijuana Dispensary</td>
<td>-0.17* [-0.35, -0.009]</td>
<td>-0.18** [-0.34, -0.02]</td>
</tr>
<tr>
<td>Education</td>
<td>0.02 [-0.02, 0.06]</td>
<td>0.02 [-0.02, 0.03]</td>
</tr>
<tr>
<td>White</td>
<td>-0.02 [-0.09, 0.05]</td>
<td>-0.03 [-0.09, 0.03]</td>
</tr>
<tr>
<td>Income</td>
<td>-0.00001 (0, 0)</td>
<td>-0.000008 (0, 0)</td>
</tr>
<tr>
<td>$R^2$</td>
<td>0.74</td>
<td>0.75</td>
</tr>
<tr>
<td>$\sigma_u$</td>
<td>0.65</td>
<td>0.73</td>
</tr>
<tr>
<td>$\sigma_e$</td>
<td>0.32</td>
<td>0.32</td>
</tr>
<tr>
<td>$\rho$</td>
<td>0.80</td>
<td>0.84</td>
</tr>
</tbody>
</table>

ᵃRef=no PMP;ᵇRef=no agency; cConfidence intervals are too small to report. Attorneys General offices were dropped from output because they were time invariant as California and Pennsylvania had AG-administered PMPs that predate our time series.

*** Significant at the 1 percent level. ** Significant at the 5 percent level. * Significant at the 10 percent level.
Discussion

- Use of legal data improves measurement on explanatory variables.
- Improves analysis of policies.
- How to improve legal measures to better approximate PMP strength?
Discussion

• How do we improve adoption of minimal standards for PMPs?
• Can use legal data for further analysis
  • LCA to determine combinations of regulatory mechanisms
Questions?

Please contact us with any questions at:

Scott Burris  scott.burris@temple.edu
Lindsay Cloud  lindsay.cloud@temple.edu
Bryce Pardo  pardob@umd.edu
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Questions?
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Thank you to today’s presenters

Scott Burris, JD
Temple University Beasley School of Law, Center for Public Health Law Research

Lindsay Cloud, JD
Temple University Beasley School of Law, Center for Public Health Law Research

Bryce Pardo
University of Maryland, School of Public Policy
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Now taking questions.

**Moderator**
Jennifer Ibrahim, PhD
Temple University College of Public Health

**Scott Burris, JD**
Temple University Beasley School of Law, Center for Public Health Law Research

**Lindsay Cloud, JD**
Temple University Beasley School of Law, Center for Public Health Law Research

**Bryce Pardo**
University of Maryland, School of Public Policy
Thank You!

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Wednesday, April 12, 12:00 – 1:00 p.m. Eastern

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Thursday, April 20, 1:00 p.m. – 2:00 p.m. Eastern

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