ASPPH Presents Webinar Series

Public Health Law Research Part II: Developing and Implementing a Policy Evaluation Using Open-Source Legal Data

Wednesday, April 12, 2017
1:00 pm-2:00 pm Eastern
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.
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

Kelli Komro, PhD
Emory University,
Rollins School of
Public Health
Presenters

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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
A Conceptual Interface for Legal Epidemiology
It is possible to study the link between law and health without theory – but don’t
Benefits of theory

• Defining the phenomena to be observed
  • shapes selection of specific legal instruments to study;
  • determines how to code and score relevant dimensions of the law;
  • points to key measures of implementation;
  • suggests specific features of the physical, organizational and social environment to observe for reactions to the law;
  • indicates high priority response behaviors in the population exposed to the law for measurement; and
  • affects specific health outcome variables to collect and analyze.
Benefits of theory

• Supporting causal inference
  • provides evidence of plausible mechanisms that can be used to assess causation;
  • helps unpack a law into regulatory components that may have varying contributions to the overall effect; and
  • helps identify dose-response relationships between specific legal components or dimensions and health-related outcomes.
Benefits of theory

• Guiding reform and implementation
  • provides important guidance on ways to influence the magnitude of the effect, reduce unintended consequences or produce the effect more efficiently
Legal epidemiology is a “transdisciplinary” field

Theory of the mechanism of a legal effect NEED NOT BE legal theory.
Between 2009 and 2014, all states adopted a similar youth sport concussion law.
We made a causal model of the problem and how the laws intervened.
Does the law work through a threat of punishing coaches who don’t remove kids from games and keep them out until cleared?

Problem: No systematic enforcement and no punishment
Procedural Justice: Compliance without Enforcement?

- Concussion law
- Legitimacy: Obligation Trust
- Procedural fairness
- Motivation to comply
- Compliance

TWE do stakeholders regard the legislature as a legitimate arbiter of sport risk?

Are the rules fair? Being applied fairly across players and teams?
Best fit? A venerable behavioral science tool: Theory of Planned Behavior

- Perceived Behavioral Control over Reporting
- Attitudes towards Reporting
- Subjective Norms of Reporting
- Intent to Report Possible TBI
- Removal from Play
- Decreased TBI Morbidity and Mortality

Lystedt Laws

Law Enforcement

Using theory to understand high school aged athletes' intentions to report sport-related concussion: Implications for concussion education initiatives

Johns K. Register-Mihalik, Laura A. Linnavuori, Stephen W. Marshall, Tamara C. Salowitch McLeod, Frederick O. Mueller, & Kevin M. Guskevicz
Now on to Lindsay Cloud

Contents

PART ONE
Framing Public Health Law Research

PART TWO
Understanding How Law Influences Environments and Behavior

PART THREE
Identifying and Measuring Legal Variables

PART FOUR
Designing Public Health Law Evaluations

Contents available free at www.phlr.org
In 1938, the Fair Labor Standards Act (FLSA) instituted a nationwide minimum wage rate that sets a minimum hourly payment amount for qualified employees across the country. Established at 25 cents per hour, it has since been increased 22 times. Congress last raised the federal minimum wage rate on July 24, 2009, to $7.25, which is roughly $15,000 per year for a 40-hour work week.

Over time, the majority of states have passed their own minimum wage laws. When there is a state-established minimum wage rate in addition to the federal rate, an employee will generally receive the higher of the two rates (the applicable minimum wage rate). For example, if the state rate is $7 and the federal rate is $7.20, the qualified employee would receive $7.20 per hour.

This map displays laws effective from January 1, 1980 through April 1, 2016. Use the time slider below the map to display changes in the law over time.

Did you know?

Five states have no minimum wage laws: Alabama, Louisiana, Mississippi, South Carolina, and Tennessee.

Related resources:
- American Journal of Public Health: The Effect of an Increased Minimum Wage on Infant Mortality and Birth Weight
- Department of Labor: History of the Minimum Wage
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

It uses a systematic approach
The process is replicable
It emphasizes transparency
There is a focus on delivering a highly accurate product through quality control
Meet the team

The practice policy surveillance is built on the model of a “transdisciplinary team”

Transdisciplinary teams *may* include: Lawyers, public health practitioners, economists, epidemiologists, researchers, policy experts, statisticians, academics, economists, social scientists
Scoping and Background Research

Defining and Redefining the Scope

Conducting Background Research

The Economic Policy Institute

Minimum Wage Tracker

The federal minimum wage has not been raised since 2009. In the absence of action at the national level, localities have raised their own minimum wages. Explore the map to see how these rapidly changing laws country, and read EPI’s recent research explaining the benefits of raising the minimum wage and eliminating subminimum wage for tipped workers. As of March 13, 2017

Federal

Minimum wage

Subminimum wage for tipped workers

Maine

N.H.

$7.25
Federal Preemption!

In 1938, the *US Fair Labor Standards Act* instituted a nationwide minimum wage rate that sets a minimum hourly payment amount for qualified employees across the country.

Established at 25 cents per hour, it has since been increased 22 times.

Congress last raised the federal minimum wage rate on July 24, 2009, to $7.25, which is roughly $15,000 per year for a 40-hour work week.
# Developing Coding Questions

## Tips!
- ✓ Ask one thing at a time
- ✓ If a question can be misinterpreted, it will be
- ✓ Consider your audience
- ✓ Focus your purpose
- ✓ Remember the process is iterative
- ✓ Consult a subject matter expert
- ✓ Create questions that ask for **observation** rather than **interpretation**

<table>
<thead>
<tr>
<th>Definitions</th>
<th>Example</th>
</tr>
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<tbody>
<tr>
<td>Observation</td>
<td>Things we measure (facts)</td>
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<tr>
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<td>Is there a state minimum wage law?</td>
</tr>
<tr>
<td>Interpretation</td>
<td>Conclusions we derive from those observations (opinions)</td>
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<tr>
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<td>Does the state have a good minimum wage law?</td>
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Collecting the Law and Creating the Legal Text

MAY 11, 2012 VERSION

Alaska Stat. § 12.55.035 Fines (2010 Amendment, ch. 110, §§ 1, 4)

(a) Upon conviction of an offense, a defendant may be sentenced to pay a fine as authorized in this section or as otherwise authorized by law.

Alaska Stat. § 12.55.135 Sentences of imprisonment for misdemeanors (2006 Amendment, ch. 86, § 1, 2006 Amendment, ch. 87, §§ 4, 5)

(a) A defendant convicted of a class A misdemeanor may be sentenced to a definite term of imprisonment of not more than one year.

Alaska Stat. § 28.01.010 Provisions uniform throughout state (2010 Amendment, ch. 29, § 38)

(a) The provisions of this title and the regulations adopted under this title are applicable within all municipalities of the state. A municipality may not enact an ordinance that is inconsistent with the provisions of this title or the regulations adopted under this title. A municipality may not incorporate into a publication of traffic ordinances a provision of this title or the regulations adopted under this title without specifically identifying the provision or regulation as a state statute or regulation.

JULY 1, 2012 VERSION

Alaska Stat. § 12.55.035 Fines (2012 Amendment, ch. 1, § 19)

(a) Upon conviction of an offense, a defendant may be sentenced to pay a fine as authorized in this section or as otherwise authorized by law.

Alaska Stat. § 12.55.135 Sentences of imprisonment for misdemeanors (no change)

(a) A defendant convicted of a class A misdemeanor may be sentenced to a definite term of imprisonment of not more than one year.

Alaska Stat. § 28.01.010 Provisions uniform throughout state (no change)

(a) The provisions of this title and the regulations adopted under this title are applicable within all municipalities of the state. A municipality may not enact an ordinance that is inconsistent with the provisions of this title or the regulations adopted under this title. A municipality may not incorporate into a publication of traffic ordinances a provision of this title or the regulations adopted under this title without specifically identifying the provision or regulation as a state statute or regulation.
What is a Master Sheet?

A Master Sheet should include:

– the **citation** and title of each law,
– the **statutory history** for each law,
– and the **effective dates**
**Is there a state minimum wage law?**
- Yes
- No

**What is the state minimum wage rate?**
- $9.75

**Does the state or federal minimum wage apply?**
- Federal Minimum Wage
- State Minimum Wage

**How is the applicable wage amount determined?**

---

**Alaska Stat. § 23.10.145 Definitions**

If not defined in this title or in regulations adopted under this title, terms as used in AS 23.10.050 – 23.10.150 shall be defined as they are defined in 29 U.S.C. 201–209 (Fair Labor Standards Act of 1938), as amended, or the regulations adopted under those sections.

**Alaska Stat. § 23.10.065. Minimum Wages**

(a) Except as otherwise provided for in law, an employer shall pay to each employee a minimum wage, as established herein, for hours worked in a pay period, whether the work is measured by time, piece, commission or otherwise. An employer may not apply tips or gratuities bestowed upon employees as a credit toward payment of the minimum hourly wage required by this section. Tip credit as defined by the Fair Labor Standards Act of 1938 as amended does not apply to the minimum wage established by this section. Beginning with the passage of this Act, the minimum wage shall be $8.75 per hour effective January 1, 2015, $9.75 per hour effective January 1, 2016 and thereafter adjusted annually for inflation. The adjustment shall be calculated each September 30, for the proceeding January–December calendar year, by the Alaska Department of Labor and Workforce Development, using 100 percent of the rate of inflation based on the Consumer Price Index for all urban consumers for the Anchorage metropolitan area, compiled by the Bureau of Labor Statistics, United States Department of Labor, the department shall round the adjusted minimum hourly wage up to the nearest one cent, the adjusted minimum hourly wage shall apply to work performed beginning on January 1 through December 31 of the year for which it is effective.
All downhill from here

Policy Surveillance Process

- Scoping
- Legal Text
- Quality Control
- Updates
## Special (Data) Delivery

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### Questions
1. **Is there a state minimum wage law?**
   - **Question Type:** Categorical - mutually exclusive
   - **Variable Name:** SMWLaw
   - **Variable Values:** 1, 2
   - **Value Label:** 1 = Yes
   - **Value Label:** 2 = No
2. **What is the state minimum wage rate?**
   - **Question Type:** Currency Field
   - **Variable Name:** MinWage_StateRate
   - **Variable Values:** N/A
3. **What is the actual rate?**
   - **Question Type:** Currency Field
   - **Variable Name:** MinWage_standardrate
   - **Variable Values:** N/A
Questions or Comments?

Join the Conversation...

[Image of a software window with a text box labeled "Enter a question for staff"]

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Kelli Komro, PhD
Emory University,
Rollins School of
Public Health

Kelli A. Komro, MPH, PhD
Emory University Rollins School of Public Health

Collaborators: Alexander C. Wagenaar, PhD, Melvin Livingston, PhD, Sara Markowitz, PhD, Scott Burris, JD, Lindsay Cloud, JD, Heidi Grunwald, PhD, & Temple wPHLR Team

The National Institute On Minority Health and Health Disparities of the National Institutes of Health under Award Number R01MD010241 supported research reported in this presentation. The content is solely the responsibility of the authors and does not necessarily represent views of the National Institutes of Health.
WHO Commission on Social Determinants of Health (CSDH, 2010)

Figure A. Final form of the CSDH conceptual framework
Family Economic Support as a Population Health Intervention: A Theoretical Model

IMPLEMENTATION POLICIES PRACTICES

Family Economic Support  →  Policy Dimensions

POLICY VARIATION

LIFE COURSE

In utero  Infancy  Childhood  Adolescence  Adulthood

HEALTH OUTCOMES

Mental Health  Physical Health  Societal Costs

OUTCOME DISPARITIES

Effects moderated by individual level factors

Natural Experiments

• In **natural experiments**, scientists do not control when and where “treatments” are implemented.

• **Changes** in laws or policies affecting population health provide opportunities for natural experiments.

• Well-designed evaluations of **policies** in real-world settings facilitate diffusion of effective strategies.
Design Elements

- Natural experiment using multiple design elements can produce strong evidence of whether a policy caused an effect and the magnitude of effect:
  - Many repeated measures
  - Functional form of effects
  - Comparison jurisdiction
  - Comparison groups
  - Comparison outcomes
  - Replications
  - Dose-response
  - Multiple design elements

Note: In our view, Shadish, Cook & Campbell (2002) provide the single most important and helpful resource to anyone designing quasi-experiments. This presentation draws heavily on their work.
Measurement

• Independent Variables:
  • Law text to legal datasets (e.g., LawAtlas)

• Dependent Variables:
  • Behaviors, health outcomes, disease incidence, injuries, deaths (e.g., Mortality, Natality)

• Mediators/Mechanisms:
  • Implementation processes, multiple proximal and intermediate outcomes

Research grant funded by the National Institute of Minority Health and Health Disparities July 2015-2019

1. Minimum Wage Laws
2. Tax Credit (EITC)
3. Unemployment Compensation
4. Temporary Assistance for Needy Families (TANF)
Most states have boosted minimum wage levels above the federal rate, which has been $7.25 since 2009. For states with lower rates or no rate, the federal minimum applies.

Poverty and infant health

- US excess infant mortality rate during post-neonatal period is driven almost entirely by excess rate among low SES
- Low birth weight
  - another sensitive consequence of low income
  - established as one of the most important predictors of infant mortality
  - increases the risk of deleterious health and economic effects into adulthood
- More than 1 in 4 women giving birth in the U.S. are below poverty level

Minimum Wage Standards

• Current federal minimum wage
  • $7.25 / hour
  • $15,080 full time

• Poverty threshold
  • Parent and one child: $15,930
  • Parent and two children: $20,090

• Population segments
  • Women
  • Low educational attainment
  • Young workers
  • Service industry

Methods

• Natural experiment
  • Many repeated measures
  • Functional form of effect
  • Comparison jurisdictions
• 50 state, 30 year study
• 206 legal changes in state minimum wage across 33 states
• Value averaging $7.01 ($5.58 to $10.44)
• State-months that differed from federal averaged $1.03 ($0.03 to $3.10)

Analysis

- Dependent variables: birth outcomes
  - Low birth weight (<2,500 grams)
  - Post-neonatal mortality (28-364 days)
- Difference-in-differences analytic approach
  - Difference between state-level minimum wage and federal minimum wage in each state and month from 1980-2011
  - Adjusted for inflation and expressed in 2011 dollars
  - State and year fixed effects
  - State-level covariates: % African American, Mean age of mothers, Poverty rate, Cigarette sales

\[ \text{InfH}_{jt} = \beta_1 \text{MW}_{jt} + \beta_2 X_{jt} + \delta_j + \gamma_t + \varepsilon_{jt} \]

Effect on Low Birth Weight Births

<table>
<thead>
<tr>
<th></th>
<th>Change in Rate per 100 Live Births (SE)</th>
<th>P-value</th>
<th>% Change (95% CI)</th>
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<td>Crude</td>
<td>-0.12 (0.04)</td>
<td>&lt;0.01</td>
<td>-1.9% (-3.1%, -0.7%)</td>
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<td>Adjusted</td>
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<td>-1.1% (-2.1%, -0.1%)</td>
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<td>Crude, 12-month Lagged</td>
<td>-0.14 (0.05)</td>
<td>&lt;0.01</td>
<td>-2.2% (-3.6%, -0.8%)</td>
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<tr>
<td>Adjusted, 12-month Lagged</td>
<td>-0.09 (0.04)</td>
<td>0.06</td>
<td>-1.3% (-2.7%, 0.0%)</td>
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</table>
## Effect on Post-neonatal Infant Mortality

<table>
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<tr>
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<th>Change in Rate per 1000 Live Births (SE)</th>
<th>P-value</th>
<th>% Change (95% CI)</th>
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<td>&lt;0.01</td>
<td>-4.0% (-6.4%, -1.6%)</td>
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<td>&lt;0.01</td>
<td>-4.5% (-6.9%, -2.2%)</td>
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<td>-0.12 (0.04)</td>
<td>&lt;0.01</td>
<td>-3.6% (-6.0%, -1.2%)</td>
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</table>
Results

• $1 increase in minimum wage associated with:
  • 1 to 2% decrease in low birth weight births
  • 4% decrease in post-neonatal mortality

• If all states in 2014 had increased their minimum by $1:
  • 2,790 fewer low birth weight births
  • 518 fewer post-neonatal deaths

• Results provide empirical evidence that increased state minimum wages are associated with reduced low birth weight births and reduced post-neonatal infant deaths.

Thank you to today’s presenters

Scott Burris, JD
Temple University
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Law Research

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Today’s Moderator and Presenters

Now taking questions.

Moderator
Jennifer Ibrahim, PhD
Temple University College of Public Health

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

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Beasley School of Law,
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Kelli Komro, PhD
Emory University,
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Public Health
Thank You!

See the webinar event page on the ASPPH website for a link to the archived webinar:


Contact: webinars@aspph.org
Coming Attractions...

ASPPH Presents Characterizing Undergraduate Public Health Education within the Academic Public Health Continuum
Thursday, April 20, 1:00 p.m. – 2:00 p.m. Eastern

ASPPH Presents Approaching the CEPH Application Process and Navigating Program Assessment
Thursday, May 4, 1:00 p.m. – 2:00 p.m. Eastern

ASPPH Presents Reaching Beyond our Students: Recruit, Educate, Engage
Thursday, June 14, 12:00 p.m. – 1:00 p.m. Eastern

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Thank you!