Peering Into Hidden Worlds:
The Past and Future of Legal Epidemiology

Michelle Mello, JD, PhD
Portrait of Leeuwenhoek at age 54 by Jan Verkolje (1686)

Sources: The Royal Society; Lane, 370 Phil. Transactions Royal Soc. Brit. 20140344 (2015)
Van Leeuwenhoek’s “Tiny Animals”

- Paramecium (a type of protist)
- amoeba (a type of protist)
- cyanobacteria
Naloxone Overdose Prevention Laws

Unintentional drug overdose is a leading cause of preventable death in the United States. Administering naloxone hydrochloride (“naloxone”) can reverse an opioid overdose and prevent these unintentional deaths. This dataset focuses on state laws that provide civil or criminal immunity to licensed healthcare providers or lay responders for opioid antagonists administration.

This is a longitudinal dataset displaying laws from January 1, 2001 through July 1, 2017.

**Questions**

1. **Does the jurisdiction have a naloxone access law?**
   - **Question Type:** Categorical - mutually exclusive
   - **Variable Name:** NAAдресsOAAYN
   - **Variable Values:** 1, 2
   - **Value Labels:**
     - 1 = Yes
     - 2 = No

2. **Do prescribers have immunity from criminal prosecution for prescribing, dispensing or distributing naloxone to a layperson?**
   - **Subquestions:**
     - 2.1. Is participation in a naloxone administration program required as a condition of immunity?
     - 2.2. Are prescribers required to act with reasonable care?

3. **Do prescribers have immunity from civil liability for prescribing, dispensing or distributing naloxone to a layperson?**
   - **Subquestions:**
     - 3.1. Is participation in a naloxone administration program required as a condition of immunity?
     - 3.2. Are prescribers required to act with reasonable care?

4. **Do prescribers have immunity from professional sanctions for prescribing, dispensing, or distributing naloxone to a layperson?**

5. **Do dispensers have immunity from criminal prosecution for prescribing, dispensing or distributing naloxone to a layperson?**
   - **Subquestions:**
     - 5.1. Is participation in a naloxone program required as a condition of immunity?
     - 5.2. Are dispensers required to act with reasonable care?
Painting by Ernest Boar.
Public Health and Law Collaboration: The Philadelphia Lead Court Study

Carla Campbell MD, MS, Ed Gracely PhD, Sarah Pan MPH, Curtis Cummings MD, MPH, Peter Palermno MS, and George Gould Esq

Accepted: September 01, 2012 Published Online: June 05, 2013

Abstract

**Objectives.** We determined whether Philadelphia Lead Court is effective in enforcing remediation in the homes of children with elevated blood lead levels.

**Methods.** We created a deidentified data set for properties with an initial failed home for lead hazards from January 1, 1998, through December 31, 2008, and compared within the first year and time to compliance for lead hazard remediation between the precourt period and between 2003 and 2008 (court period). We evaluated predicted time to compliance.

**Results.** Within 1 year of the IFHI, 6.6% of the precourt and 76.8% of the court cases had compliance (P < .001) for the 3764 homes with data. Four years after the IFHI, 18% had compliance in the precourt period compared with 83.1% for the court period (P < .001). A hazard analysis found that compliance was 8 times more likely in the court than the precourt period (P < .001).

Local Legal Infrastructure and Population Health

Julia F. Costich JD, PhD, and Dana J. Patton PhD

Accepted: January 01, 2012 Published Online: September 12, 2012

Abstract

**Objectives.** We explored the association between the legal infrastructure of local public health, as expressed in the exercise of local fiscal and legislative authority, and local population health outcomes.

**Methods.** Our unit of analysis was public health jurisdictions with at least 100,000 residents. The dependent variable was jurisdiction premature mortality rates obtained from the Mobilize Action Toward Community Health (MATCH) database. Our primary independent variables represented local public health's legal infrastructure: home rule status, board of health power, county government structure, and type of public health delivery system. Several control variables were included. We used a regression model to test the relationship between the variety of local public health legal infrastructure identified and population health status.

**Results.** The analyses suggested that public health legal infrastructure, particularly reformed county government, had a significant effect on population health status as a mediator of social determinants of health.
Critical Opportunities for Public Health Law: A Call for Action

- Michelle M. Mello, JD, PhD, MPhil, Jennifer Wood, PhD, Scott Burris, JD, Alexander C. Wagenaar, PhD, Jennifer K. Ibrahim, PhD, MPH, and Jeffrey W. Swanson, PhD, MA

### Criteria

**Addresses a problem of public health significance**
- Prevalence of the health condition
- Severity of harm
- Distributional effects

**Plausibly amenable to change through law**
- Health problem is causally related to behaviors, conditions, or other determinants that could plausibly be influenced by law

**Plausible legal intervention identified**
- Likely to be effective
- No insurmountable legal barriers
- Political opposition could be overcome in time
## 10 Great Public Health Achievements of the 20\textsuperscript{th} Century

<table>
<thead>
<tr>
<th>1. Recognition of tobacco use as a health hazard</th>
<th>2. Decline in deaths from coronary heart disease and stroke</th>
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<tbody>
<tr>
<td>3. Motor vehicle safety</td>
<td>4. Safer and healthier foods</td>
</tr>
<tr>
<td>5. Fluoridation of drinking water</td>
<td>6. Healthier mothers and babies</td>
</tr>
<tr>
<td>7. Control of infectious disease</td>
<td>8. Family planning</td>
</tr>
<tr>
<td>9. Vaccination</td>
<td>10. Safer workplaces</td>
</tr>
</tbody>
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Sources: CDC (1999); Moulton, Goodman & Parmet (2007)
Painting by Ernest Boar.
Looking Ahead

**Big Data**
- From econometrics to data science
- Large datasets

**Big Issues**
- Social determinants
- Climate change and global law
- Trust in institutions