


hot topics in practice

A Public Health Research Series by **Northwest Center FOR PUBLIC HEALTH PRACTICE**


Addressing Inequities in Labor Laws for Agricultural Workers



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www.werhpa.org/hot-topics

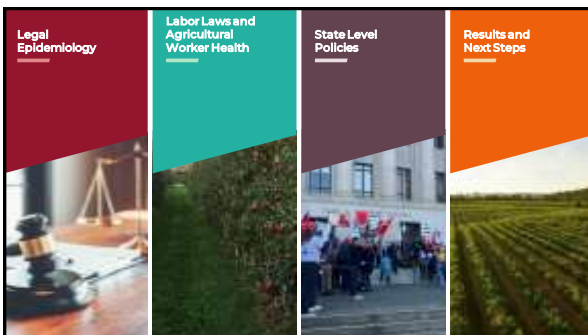
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How familiar are you with legal epidemiology?

- A. Very familiar
- B. Somewhat familiar
- C. Not at all familiar
- D. Other (please type in chat)

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Legal Epidemiology

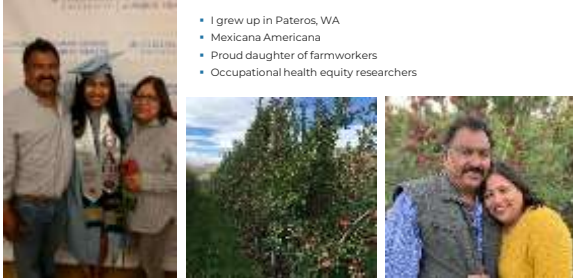
Labor Laws and Agricultural Worker Health

State Level Policies

Results and Next Steps

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A Little About Me



- I grew up in Pateros, WA
- Mexicana Americana
- Proud daughter of farmworkers
- Occupational health equity researchers

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Legal Epidemiology



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Labor & Industries Work Equity Research Center (WERC)


Supporting Underserved Workers through Collaborative Research

The purpose of the Work Equity Research Center (WERC) is to work with communities to co-create research projects and develop solutions to improve work-related outcomes for historically and currently underserved workers. We do this by bringing together stakeholders to focus attention and invest resources on the work-related concerns, needs, barriers, and solutions for communities that are currently underserved.

Learn more at [WorkEquityResearchCenter.org](#)

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Legal Epidemiology



Legal epidemiology is the study of law as a factor in the cause, distribution, and prevention of disease and injury (CDC).

Learn more at [CDC Public Health Law Program](#)

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What Does That Involve?

- Measure** the distribution of laws across jurisdictions and over time
- Evaluate** the implementation and impact of legal interventions on public health
- Analyze** the implementation and impact of laws
- Enable and support** the rapid diffusion of healthier laws and policies

Learn more at [Temple University Center for Public Health Law Research](#)

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Example from LawAtlas

Anti-Bullying Laws
This longitudinal dataset provides a comprehensive overview of anti-bullying laws across all 50 states and the District of Columbia, from January 1, 1999, through January 1, 2018.

Public Health Topic Maternal, Infant and Child Health	Geography 50 U.S. states and the District of Columbia	Source LawAtlas
Date Range January 01, 1999 – January 01, 2018	Last Updated Apr 25, 2024	

Variables

- Does the state regulate bullying?
- Does the law define bullying?
- Does the law regulate cyberbullying?
- Does the law recognize the link between bullying and adverse outcomes?
- Plus 18 others...

Dataset example from LawAtlas.org

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Other Legal Epi Examples

Foodborne illness outbreaks and state laws on unpasteurized milk

- Authors used legal epi methods to collect state statutes related to the sale of unpasteurized milk for human consumption.
- Found an association between state laws that increase the availability of unpasteurized milk and more outbreak-associated illnesses and outbreaks.

Foodborne illness outbreaks linked to unpasteurized milk and relationship to changes in state laws - United States, 1998-2018

Joe Paulozzi^{1,2}, Joseph Brueggler^{1,2}, Lisa Goldman^{1,2}, Rachel Hoffman^{1,2}, Helen Rossell Williams^{1,2}, Sarah Seale^{1,2}, Benjamin Hall^{1,2}, Mike R. Beale¹, Michael C. Baker^{1,2}, Michael E. Baker^{1,2}, Cara Shyne Fawcett^{1,2}, Cynthia A. Johnson^{1,2}, John A. Crerar^{1,2}, Elizabeth A. Gilliland^{1,2}, S. Scott Fitzgerald^{1,2}, Matthew Ajakaiye^{1,2}, Sara A. Williams^{1,2} and Scott McKeown^{1,2}

Division of Field Epidemiology and Public Health Studies, Centers for Disease Control and Prevention, Atlanta, Georgia, USA; Division of Field Epidemiology and Public Health Studies, National Center for Zoonotic Control, Food Safety and Inspection Service, United States Department of Agriculture, Ames, IA, USA; Centers for Disease Control and Prevention, Atlanta, Georgia, USA; Centers for Disease Control and Prevention, Atlanta, Georgia, USA; Centers for Disease Control and Prevention, Atlanta, Georgia, USA; Centers for Disease Control and Prevention, Atlanta, Georgia, USA; Centers for Disease Control and Prevention, Atlanta, Georgia, USA; Centers for Disease Control and Prevention, Atlanta, Georgia, USA; Centers for Disease Control and Prevention, Atlanta, Georgia, USA; Centers for Disease Control and Prevention, Atlanta, Georgia, USA

Abstract

The availability of unpasteurized milk in the United States increased a public health risk through its association with increased risk of foodborne illness, including listeriosis, salmonellosis, and cryptosporidiosis. Using historical and legal epidemiologic approaches, we examined the association between state laws that increase the availability of unpasteurized milk and foodborne illness outbreaks. Population-based, time-series data on reported foodborne illness outbreaks in the United States from 1998 to 2018 were analyzed using logistic regression. State laws that increase the availability of unpasteurized milk were associated with an increased risk of foodborne illness outbreaks (adjusted odds ratio [AOR], 1.11; 95% confidence interval [CI], 1.05-1.17). This association was stronger for listeriosis (AOR, 1.19; 95% CI, 1.08-1.31) and salmonellosis (AOR, 1.11; 95% CI, 1.04-1.18) than for cryptosporidiosis (AOR, 1.08; 95% CI, 1.00-1.17). This association remained after adjusting for other factors. The association between state laws and foodborne illness outbreaks was stronger in states with a higher proportion of unpasteurized milk (AOR, 1.14; 95% CI, 1.03-1.26) than in states with a lower proportion of unpasteurized milk (AOR, 1.07; 95% CI, 1.01-1.13). This association was also stronger in states with a higher proportion of unpasteurized milk (AOR, 1.13; 95% CI, 1.05-1.21) than in states with a lower proportion of unpasteurized milk (AOR, 1.07; 95% CI, 1.01-1.13). These findings suggest that state laws that increase the availability of unpasteurized milk are associated with an increased risk of foodborne illness outbreaks, particularly listeriosis and salmonellosis. These findings have implications for public health and policy.

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Another Legal Epi Example

COVID-19 and state-wide closures and mask mandates

- Authors obtained data on statewide closures and mask mandates from state government websites and executive orders.
- Found that counties in states with closures of <59 days were associated with increased incidence of COVID-19.

COVID-19 and state-wide closures and mask mandates


Johns Hopkins University, Baltimore, Maryland, USA; Johns Hopkins University, Baltimore, Maryland, USA; Johns Hopkins University, Baltimore, Maryland, USA; Johns Hopkins University, Baltimore, Maryland, USA; Johns Hopkins University, Baltimore, Maryland, USA; Johns Hopkins University, Baltimore, Maryland, USA; Johns Hopkins University, Baltimore, Maryland, USA; Johns Hopkins University, Baltimore, Maryland, USA; Johns Hopkins University, Baltimore, Maryland, USA; Johns Hopkins University, Baltimore, Maryland, USA

Abstract

Statewide closures and mask mandates were implemented in response to the COVID-19 pandemic. We examined the association between statewide closures and mask mandates and the incidence of COVID-19 in the United States. We used data on statewide closures and mask mandates from state government websites and executive orders. We also used data on the incidence of COVID-19 from the Centers for Disease Control and Prevention. We used multivariable logistic regression to examine the association between statewide closures and mask mandates and the incidence of COVID-19. We found that counties in states with closures of <59 days were associated with an increased incidence of COVID-19 (adjusted odds ratio [AOR], 1.12; 95% confidence interval [CI], 1.05-1.19). This association was stronger for states with a higher proportion of counties with closures of <59 days (AOR, 1.15; 95% CI, 1.06-1.25) than for states with a lower proportion of counties with closures of <59 days (AOR, 1.09; 95% CI, 1.01-1.18). These findings suggest that statewide closures and mask mandates are associated with a decreased incidence of COVID-19. These findings have implications for public health and policy.

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Legal Epidemiology In Summary



- ✓ Systematically code the law to understand status of laws
- ✓ Assess the association of laws and health

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**Labor Laws and
Agricultural
Worker Health**

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U.S. Agricultural Workers

- There are about 2.6 million agricultural workers in the US.
- States with the highest number of agricultural workers:
 - California
 - Texas
 - Tennessee
 - Oklahoma
 - Florida

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Demographics of US Agricultural Workers

National Agricultural Workers Survey 2019-2020 data	
Latinx ethnic background	78%
US born	30%
Foreign born	70%
Authorized permission to work in US	56%
Self-reported English-speaking ability (not at all or somewhat)	67%
Self-reported English reading ability: not at all or somewhat-	69%
Mean/median family income	\$25,000-\$29,999

Data source: National Agricultural Workers Survey

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Agricultural Work Conditions & Environment

Occupational health risks:

- Exposure to heat
- Repetitive motion
- Pesticide and chemical exposure

Environmental conditions:

- Crowded or substandard housing
- Minimal sanitation standards
- Barriers to health care
- Language barriers
- Lack of transportation

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Injuries and Deaths



- In 2015, the agricultural industry had the highest fatal work injury rate of **22.8 per 100,000** full-time workers compared to an all-worker fatal injury rate of 3.4.
- **573 total number of fatal work injuries** in 2019 (surpassed only by the transportation and warehousing industry)
- **100 agricultural workers** across the US have an injury that results in work time loss per day.

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Agricultural Exceptionalism




A form of structural oppression that excludes agricultural workers from most worker protection laws in the US.

"Why is it that farmworkers feed the nation, but they can't get food stamps?"

- Dolores Huerta, American Labor Leader & Civil Rights Activist

Photo from Dolores Huerta Foundation: www.doloreshuerta.com


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Federal Law Exclusions

- National Labor Relations Act (NLRA) of 1935
- Federal Fair Labor Standards Act (FLSA) of 1938
- Agricultural workers (as well as domestic workers) were intentionally excluded from FLSA and NLRA.

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Do you think legal epidemiology methods could be applied in your work?

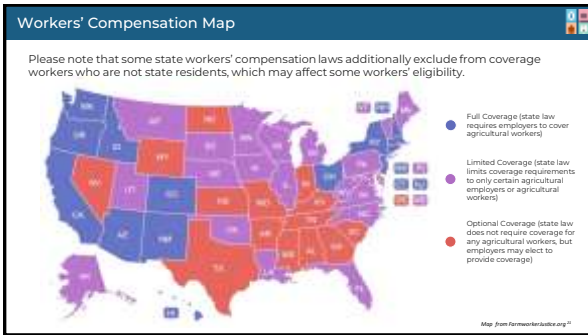
- A. Definitely
- B. Maybe
- C. I'm not sure I see a connection
- D. Other (please type in chat)

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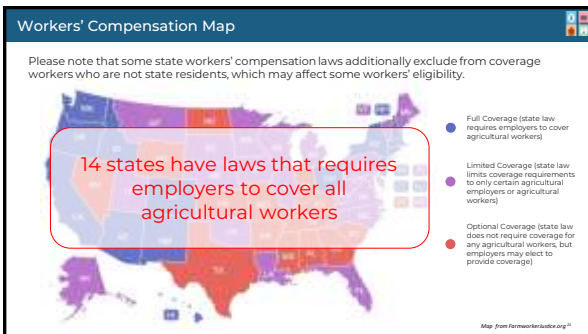


Overview of State-Level Policies

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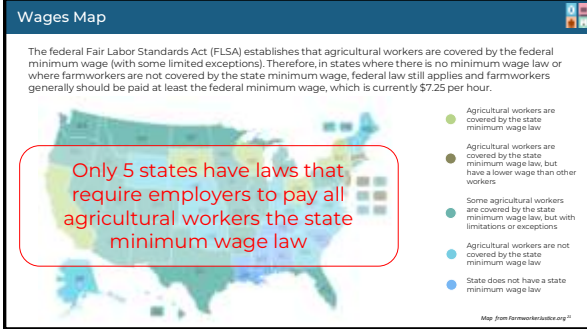
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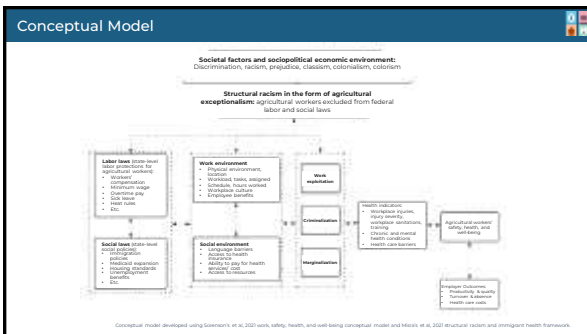
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Development of Labor Law Equity Index

Develop a labor law equity index (LLEI) that captures how states across the US include (or exclude) agricultural workers in their workers' compensation, minimum wage, and overtime pay laws.

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Scope of the Project



Labor laws for 39 states



Laws/protectons included:

- Workers' compensation
- Minimum wage
- Overtime pay







Assess changes in these laws during January 1, 2001 to December 31, 2017



We assessed criteria for adult agricultural workers (18+)

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Methods

-  Developed coding questions
-  Collected the law using WestLaw
-  Coding the law (N = 39 states)
-  Creating the index

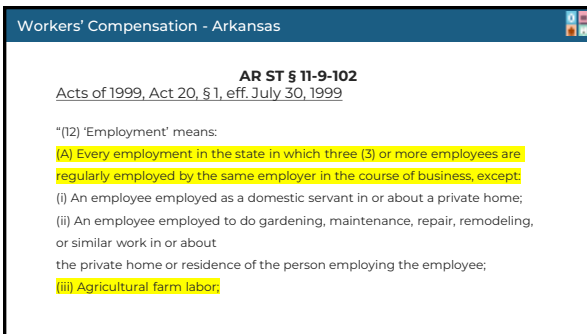
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Order	Question	Possible Answers	Public Description*	Internal Notes**	Question Type
1 (P)	Does the state have a workers compensation law?	1- Yes 0- No	State has a statute for workers compensation for any and all workers.		Binary – mutually exclusive
2 (C)	Does the workers compensation law include agricultural workers?	2- Yes, all AW included 1- Yes, some AW are included 0- Optional for employers to include AW -1- No, AW are excluded from WC law	State has a statute for workers compensation that covers agricultural workers	All AW included (state law requires employers to cover AW) Some AW included (state law limits coverage requirement to only certain agricultural employees or AW). Optional (state law does not require coverage for any AW, but employers may elect to provide coverage) AW are explicitly excluded (state law does not include AW in their definition of employees, explicitly excluded)	Categorical – mutually exclusive
3 (C)	If selected "Yes, some AW are included" what is the exemption?	Small farms (specified by number of employees or payroll) Family working on farm Other	Description of state exemption of certain AW or AW employers from WC.		Categorical – select all that apply

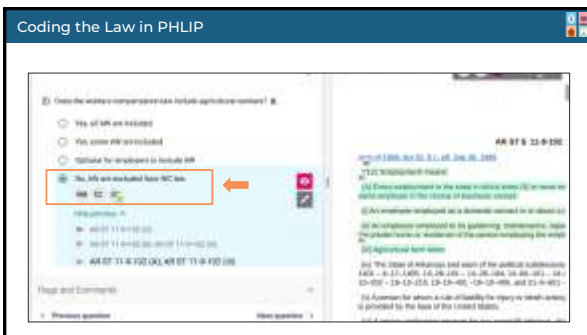
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Developing the Index

- Scores for each protection ranged from -1 to 2
- Summing the scores of the three laws
- Total theoretical score for each state would range from -3 to 6 (WC, OT, MW) for each year and state.



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Results & Next Steps

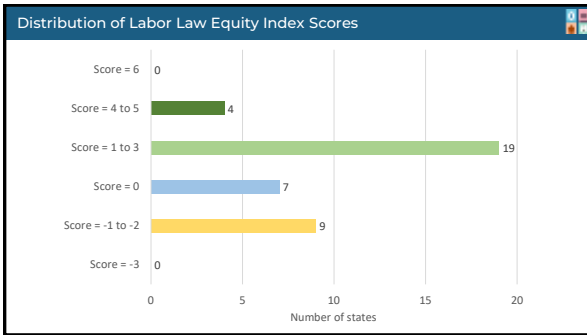
Photo by Dan Hubbard on Unsplash

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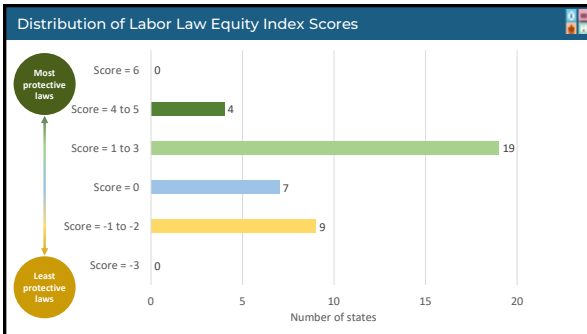
Changes Over Time, 2001-2017

- Workers' compensation - no significant amendments**
- Minimum wage - 3 amendments**
 - Florida - "no state minimum wage law" → "some agricultural workers included" in 2006.
 - Idaho - "agricultural workers not included" → "some agricultural workers included" in 2002.
 - Missouri - "agricultural workers not included" → "some agricultural workers included" in 2007.
- Overtime pay - 2 amendments**
 - Nebraska - "optional" → "some agricultural workers included" in 2004.
 - New Mexico - "optional" → "some agricultural workers included" in 2017.

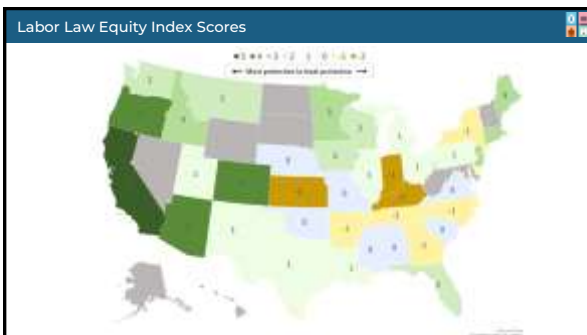
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Limitations and Implications



Limitations:

- There are amendments to these laws that occurred after 2017 that are not captured in this index.
- Not able to assess how the law is practiced or implemented.

Impact & implications:


- First time an index is created to capture level of protective state-level laws for agricultural workers.
- Address the gap in knowledge about the role of labor laws in worker health.


Bottom left, artist Erica Alexa

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Next Steps

Assessing the association of the labor law equity index with agricultural worker health outcomes

 Examine the association of the index with workplace health indicators using the National Agricultural Worker Survey data.

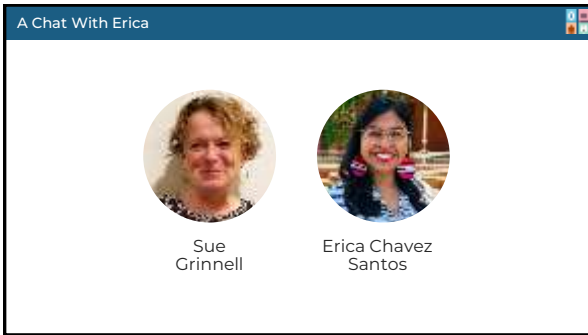
 **Hypothesis:** States with a higher LLEI score (more protective laws) will be associated with more positive health indicators (i.e., higher provision of water/toilet/handwash station/training).

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Key Takeaways

- ✓ This index measures to some extent how agricultural workers are differentially treated and also, provides insight to general labor laws in these states.
- ✓ Patterns in states that include agricultural workers or uphold agricultural exceptionalism.
- ✓ Work is an important determinant of health and agricultural workers are essential workers. It's unjust that they are not provided the same benefits as other workers.
- ✓ Legal epidemiology is a tool that we can use to understand and address occupational health inequities.

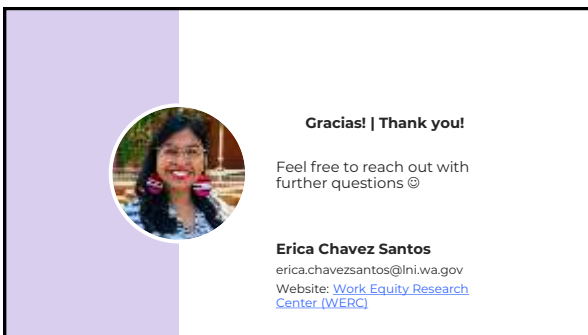
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Resources & Further Reading

Farmworker Justice
<https://www.farmworkerjustice.org/general-map/>

The National Agricultural Law Center
<https://nationalaglawcenter.org/state-compilations/agpay/>

LawAtlas
<https://lawatlas.org/>

CDC Public Health Law Program
<https://www.cdc.gov/php/php/index.html>
