

# Urban vs Rural Impact of Tobacco 21: A Case Study of Oregon

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# Motivation

- In 2018, Oregon passed legislation raising the minimum age to purchase tobacco from 18 to 21 years, 2 years before the federal Tobacco 21 law was enacted.
- We want to study the impact of the policy on the cohort who lost the ability to purchase tobacco products and those just under the new legal age.

# Research Question

What is the impact of Tobacco 21 policies on 16-21 year-olds who live in Rural communities versus Urban?

# Prior Research

Existing research shows:

- Tobacco 21 policies lower youth smoking rates overall
- Some studies use national-level data or focus on short-term effects

**Gap:** Very little on rural vs urban heterogeneity, particularly given the impact of addiction in rural communities and the intersectional nature of risky behavior

- **Youth Risk Behavior Surveillance System (YRBSS):**
  - Biennial survey of U.S. high school students (grades 9–12).
  - Measures risk behaviors: tobacco use, drug use, physical activity, etc.
  - Available at national, state, public school district levels.
- Focus on 30-day tobacco use as the primary outcome.
- Supplemented with county- or state-level demographic and policy data.

## **Synthetic Control Method:**

- Construct counterfactual trends for treated units using a donor pool of states with no Tobacco 21 policies between 2000–2020.
- Minimize pre-treatment prediction error on outcome and covariates.

## **Potential Covariates**

- Lagged outcome variables (30-day tobacco usage)
- Smoking Rate Among Adults
- State tobacco tax rate
- Median household income