

Differential Effects of Smoke-free Laws on Smoking Cessation Behavior

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Purpose

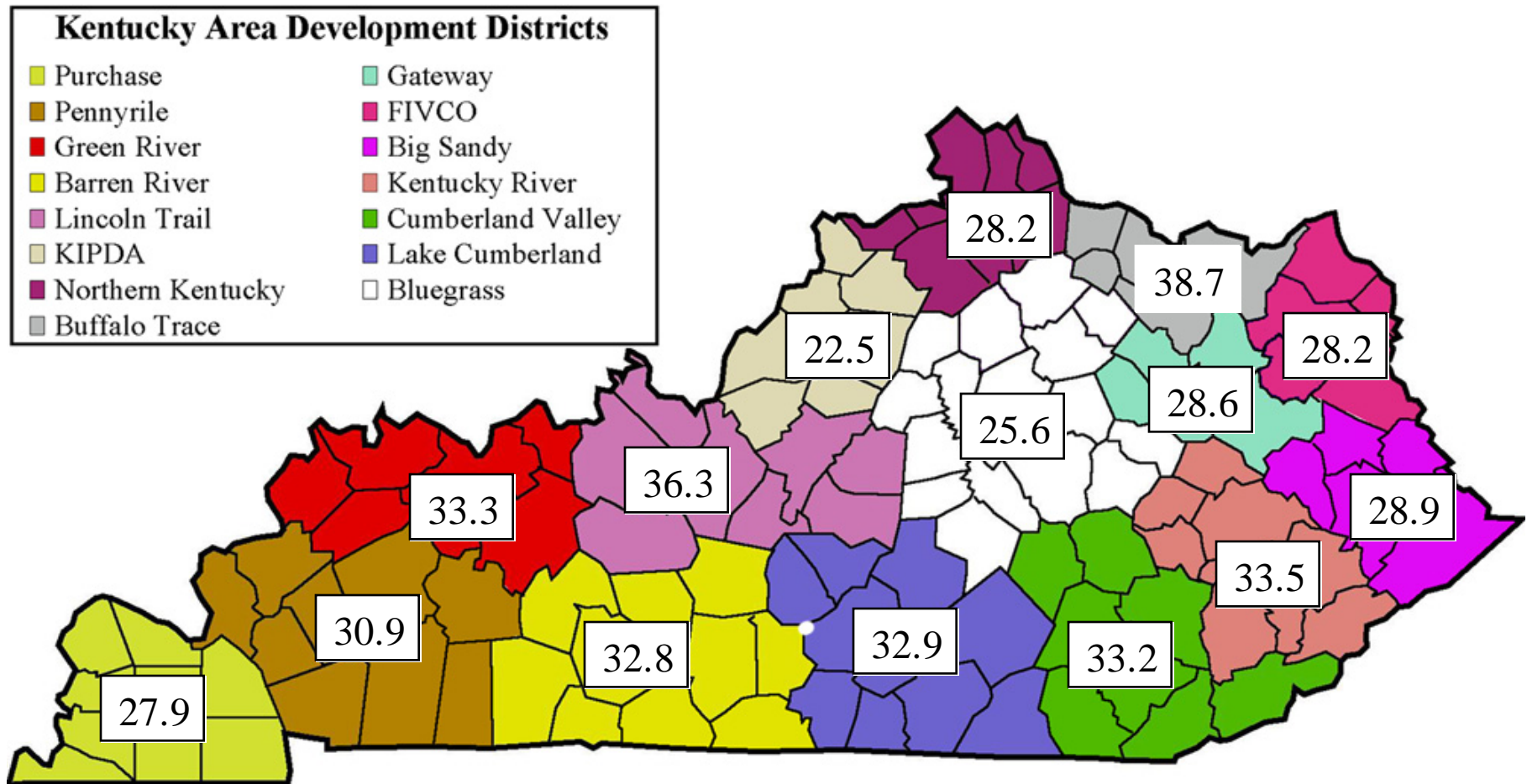
- To test the effect of *time* on smoking rates in communities with smoke-free laws, and analyze the effect of strength of policy on cessation behaviors.

Background



- Smokers make an average of 10 quit attempts prior to eventual abstinence.
- Smoke-free laws are associated with declines in cigarette consumption and smoking prevalence.
- While quit attempts may increase immediately after implementation of a smoke-free law, actual smoking rates may not drop until later.

Percent of Adult Smoking by Area Development District, Kentucky, 2006



Behavioral Risk Factor Surveillance System, CDC, 2006

Hypotheses/Research Questions

- Smokers in smoke-free communities will be more likely to attempt to quit and smoke fewer cigarettes compared to smokers in non smoke-free communities.
- The stronger the smoke-free law, the more likely smokers will be to attempt to quit and reduce cigarettes smoked per day.
- Does time since ordinance implementation effect smoking cessation behaviors?

Methods



- Quasi-experimental 3-group design
- Cross-sectional, 10-minute telephone survey with a random sample of 655 current and former smokers from communities with and without smoke-free laws.
- Participants selected by a modified Waksberg Random-Digit Dialing method

Study Groups



Tx Group I (Comprehensive Laws): (n = 295)

- Lexington: 3 years post-implementation ($n = 102$)
- Georgetown: 18 months post-implementation ($n = 87$)
- Morehead/Frankfort: (6-8 months post) ($n = 106$)

Tx Group II (Partial Laws): (n = 202)

- Louisville: 18 months post-implementation) ($n = 101$)
- Daviess County: 18 months post-implementation ($n = 101$)

Control Group: (n = 158)

- Current and former (quit within past 3 years) smokers in non-contiguous counties to all communities in Kentucky that have smoke-free laws.

Sample

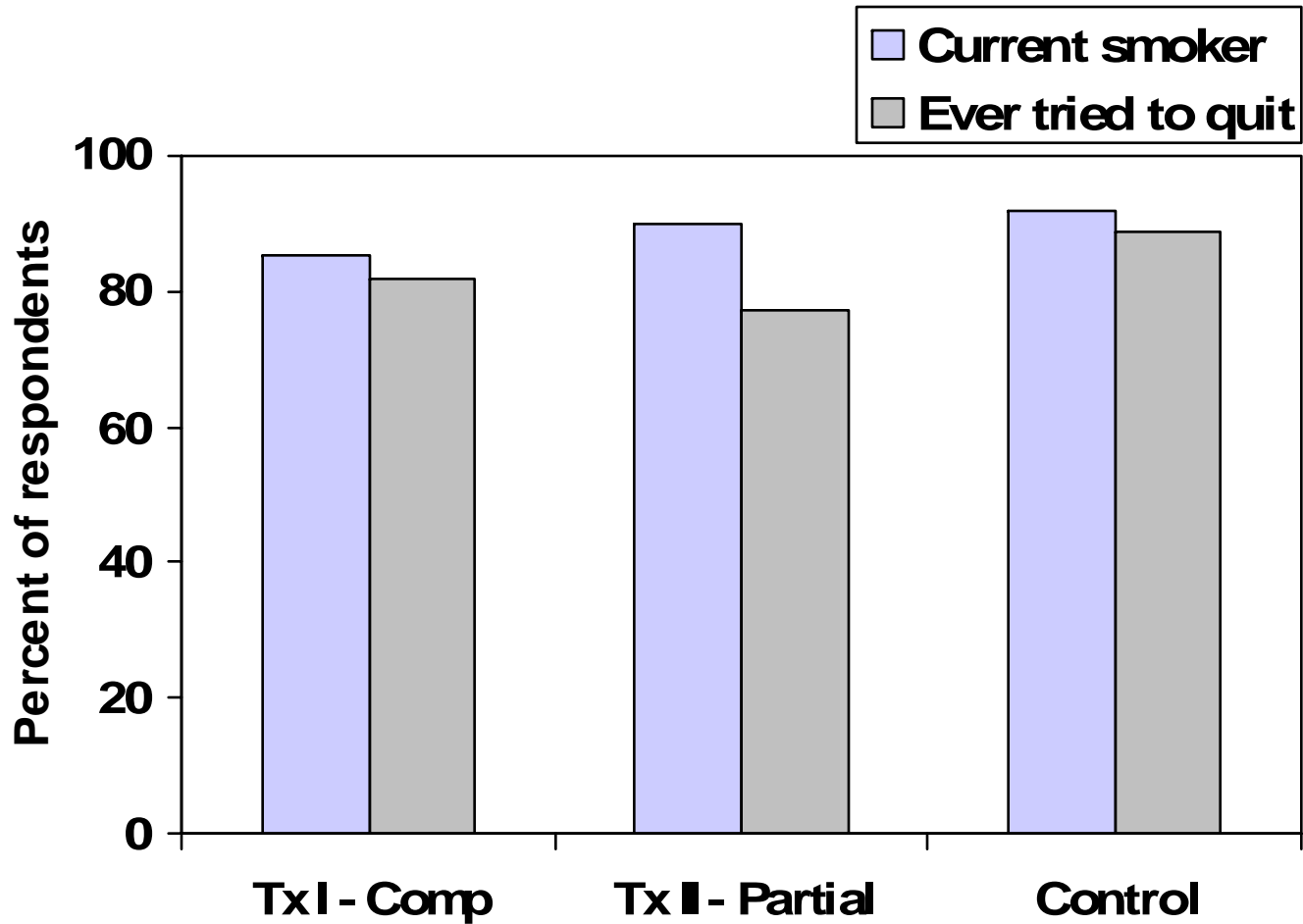


- Non-institutionalized, current and former smokers
 - former defined as quit since the law took effect in their respective community (or quit in the past 3 years in Control communities).
- Eligibility criteria: 18 or older; must live and work in the community and must have lived there for at least five years.

Sample Characteristics

- Average age 49.1 (range 18 to 87 years)
- 47.4% male
- 57.7% annual income 40K or less
- 88.3% current smoker

Smoking Behaviors by Study Group



Measures



- Smoking and quit behaviors (current smoking status, attempts to quit, cigarettes per day [CPD])
- Workplace smoking policies and hours exposed to SHS at work

Data Analysis

- Analysis based on weighted responses so the sample would be more representative of the population
- Group comparisons made controlling for age, gender and income

Findings: Effects of SF Laws

- Those in counties with SF laws were 2.9 times more likely to report a smoke-free policy at their place of work ($p = .003$), compared to Controls
- On average, those in counties with SF laws were exposed to nearly 5 fewer hours of SHS at work in the last week ($p = .03$), compared to Controls



Findings: Strength of Law

- Although those living in areas with comprehensive laws reported abstaining from cigarettes for a longer time on their last quit attempt compared to those in communities with partial laws, this difference was not significant when controlling for demographics.

Findings: Time Since Law

- Respondents in the 6 to 8-mo group were 5.6 times more likely to be current smokers, compared to the 3-year group ($p = .008$).
- Compared to those in the 6 to 8-mo group, those in the 18-mo group were 2.4 times more likely to have tried to quit since the law, and those in the 3-yr group were 3.6 times more likely to have attempted to quit since the SF law ($p = .0007$).

Conclusions



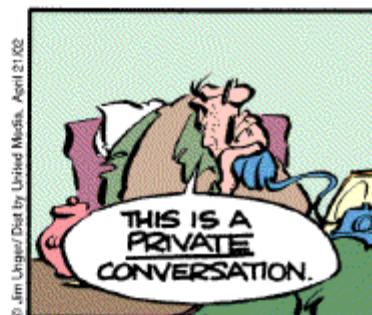
- Respondents from counties with SF laws were more likely to work in SF environments and were exposed to SHS at work for fewer hours, compared with Controls.
- Although smokers in areas with comprehensive laws abstained from cigarettes longer on their last quit attempt, these differences were not significant when controlling for demographic factors.
- Respondents from areas with a longer time since law were less likely to be current smokers and were more likely to have attempted to quit since enactment.

Limitations

- Given relatively few communities with smoke-free laws, it was not possible to consider both time since law and strength of law simultaneously – the only partial laws were enacted 18 months prior to the survey.

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