



# Effect of Smokefree Laws on Alcohol-Related Fatal Traffic Crashes



Debra H. Bernat, Ph.D.

## Background

Restricting smoking in public places is an essential component of tobacco control.

Smokefree laws in restaurants and bars may have unintended consequences on alcohol-related car crashes because tobacco and alcohol use frequently co-occur.

A previous study found a 13% increase in fatal traffic crashes as a result of smokefree bar laws.

## Research Question

In one of the most populous states in the US, New York, did the implementation of smokefree bars and restaurants increase, decrease, or have no effect on alcohol-related car crashes?

## Methods

### Measures.

New York Statewide Smokefree Law:  
Effective July 24, 2003

Alcohol-Related Fatal Traffic Crashes:  
Single-vehicle-nighttime (SNV)  
Blood Alcohol Concentration .08+

Covariates:  
State Population  
Alcohol-Related Crash Fatalities for all other states (to control for secular trends)

### Data Analysis.

Time Series Design (SAS PROC ARIMA)  
Monthly data from 1982 to 2008

## Results

Figure 1. Time series of single vehicle nighttime fatal traffic crash rate (per 100000) in New York from 1982 to 2008

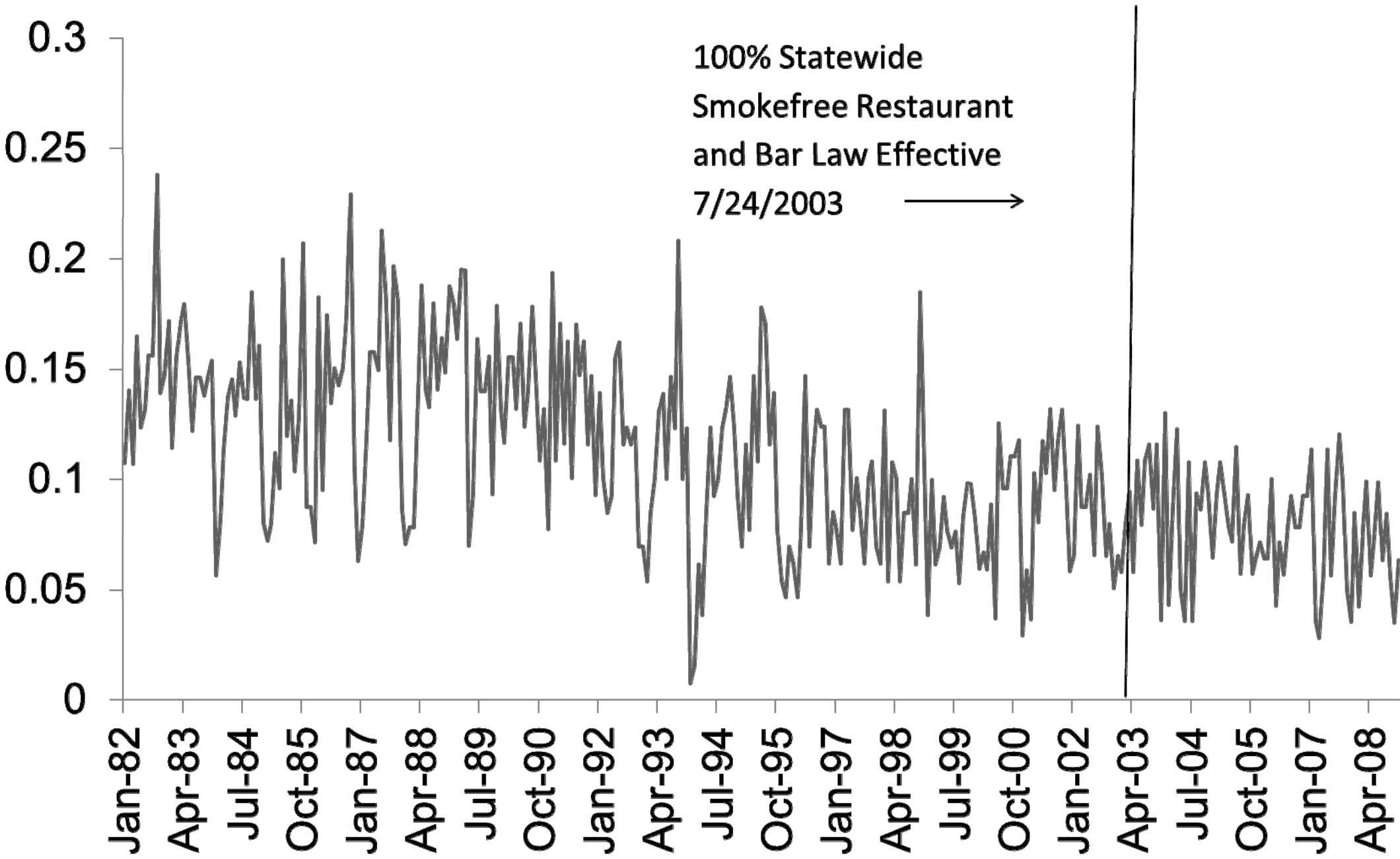


Table 1. Results from Arima models

Model Variables	SVN Fatal Traffic Crashes		.08+ Fatal Traffic Crashes	
	Est. (SE)	p	Est. (SE)	p
Model 1: Unadjusted				
NY Smokefree Law	.02 (.03)	.51	.02 (.02)	.19
Model 2: Adjusted				
Outcome – Other States	.35 (.11)	<.01	.61 (.10)	<.01
NY Smokefree Law	.01 (.03)	.61	.02 (.02)	.24

## Conclusions/Next Steps

Conclusions. Despite the potential positive effects of smokefree laws, previous studies suggest some deleterious effects on alcohol-related traffic fatalities. This study adds to the dearth of research in this area. This study shows that New York’s statewide smokefree restaurant and bar law did not increase alcohol-related fatal traffic crashes across the state.

Next Steps. Examine replication of findings in other states.