

Do Local Tobacco-21 Laws Reduce Smoking among 18 to 20 Year-Olds?

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Abstract

Introduction

States and municipalities are increasingly restricting tobacco sales to those under age-21, in an effort to reduce youth and young adult smoking. However, the effectiveness of such policies remains unclear, particularly when implemented locally.

Methods

Analyses use 2011 - 2016 data from the Behavioral Risk Factor Surveillance System's Selected Metropolitan/Micropolitan Area Risk Trends dataset. Difference-in-differences and triple-difference regressions estimate the relationship between local tobacco-21 policies and smoking among 18 to 20 year-olds living in MMSAs (metropolitan/micropolitan statistical areas).

Results

Current smoking rates fell from 16.5 percent in 2011 to 8.9 percent in 2016 among 18-20 year-olds in these data. Regressions indicate that a tobacco-21 policy covering one's entire MMSA yields an approximately 3.1 percentage point reduction in 18 to 20 year-olds' likelihoods of smoking [CI: -0.0548, -0.0063]. Accounting for partial policy exposure — tobacco-21 laws implemented in some but not all jurisdictions within an MMSA — this estimate implies that the average exposed 18 to 20 year-old experienced a 1.2 percentage point drop in their likelihood of being a smoker at interview relative to unexposed respondents of the same age, all else equal.

Conclusions

Local tobacco-21 policies yield a substantive reduction in smoking among 18 to 20 year-olds living in metropolitan and micropolitan statistical areas. This finding provides empirical support for efforts to raise the tobacco purchasing age to 21 as a means to reduce young adult smoking. Moreover, it suggests that state laws preempting local tobacco-21 policies may impede public health.

Implications

While states and municipalities are increasingly restricting tobacco sales to under-21-year-olds, such policies' effectiveness remains unclear, particularly when implemented locally. Using quasi-experimental methods, this paper provides what may be the first evidence that sub-state tobacco-21 laws reduce smoking among 18 to 20 year-olds. Specifically, considering metropolitan and micropolitan areas from 2011 to 2016, the average 18 to 20 year-old who was exposed to these policies exhibited a 1.2 percentage point drop in their likelihood of being a current established smoker, relative to those who were unexposed. These findings validate local tobacco-21 laws as a means to reduce young adult smoking.

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