

Impact of vaping restrictions in public places on smoking and vaping in the US: Evidence using a difference-in-differences approach

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Abstract

Aims: To estimate whether and to what extent extending indoor smoking restrictions to include electronic cigarettes (ECs) impact the use of ECs and cigarette smoking among adults in the US.

Design: Observational study using a linear probability model and applying a difference-in-differences analysis **SETTING:** USA **PARTICIPANTS:** People aged 18 to 54 who lived in US counties where comprehensive indoor smoking laws in bars, restaurants, and private workplaces have been in place prior to 2010 (N = 45,111 for EC use analysis, N = 75,959 for cigarette use analysis).

Measurements: Data on cigarette smoking, use of ECs, and place of residence from the Tobacco Use Supplement of the Current Population Survey (TUS-CPS 2010-2011, 2014-2015, and 2018-2019) were combined with the American Nonsmokers' Rights Foundation (ANRF) database of state and local indoor smoking and vaping restriction laws.

Findings: Indoor vaping restriction (IVR) coverage was not significantly associated with the likelihood of adult EC use (coefficient estimate = 0.001; 95% confidence interval [CI] = -0.009, 0.013, P-value = 0.783). In addition, IVR coverage was not significantly associated with adult cigarette smoking (coefficient estimate = -0.00; 95% CI = -0.016, 0.015, P-value = 0.954). The non-significant results appeared in different socio-demographic subgroups.

Conclusions: Indoor vaping restrictions do not appear to decrease electronic cigarette use among US adults. There is no evidence that indoor vaping restrictions increase or decrease cigarette smoking among US adults.

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