Discussion | Racism has been shown to be detrimental to the health of individuals and families. This analysis of population-based, demographically diverse, national data suggests that children in the United States are not impervious to racism and discrimination in their daily lives, with 4.8% reporting being treated unfairly because of their race, ethnicity, or color. Overall, children from non-White groups or from lower-income households were more likely to report discrimination. Among Black children, 10.0% reported racism, with a higher likelihood of these experiences among Black children in households with higher incomes. Although the perpetrators of racism were mostly peers, teachers and other adults were often reported as the source of this unfair treatment, highlighting the critical need to ensure antiracism practice and address structural racism within educational communities, which are important social determinants of health. Limitations of this study include the use of self-reported data. Pediatricians should consider screening for racism as a component of adverse childhood experiences. Mitigating the effects of racism on health should start with interventions in childhood.

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Additional Information: A complete listing of the ABCD study investigators can be found at https://abcdstudy.org/principal-investigators.html.

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A Difference-in-Differences Analysis of Youth Smoking and a Ban on Sales of Flavored Tobacco Products in San Francisco, California

Restrictions on flavored tobacco product sales are increasingly popular; 5 US states and hundreds of localities have implemented them in the past few years alone. Yet only 1 study, to my knowledge, has considered how complete flavor bans applying to electronic nicotine delivery systems and combustible tobacco products, without retailer exemptions, are associated with tobacco use. A convenience sample of residents of San Francisco, California, aged 18 to 34 years who had ever used a tobacco product showed significant reductions in any tobacco use following the city's flavor ban, with a marginally significant increase in combustible cigarette use (smoking) among those aged 18 to 24 years. Absent a comparison group, however, it is impossible to ascertain if preexisting trends could have driven these findings.

Given the relative health costs of smoking vs vaping nicotine,2,3 flavor bans that increase smoking may prove harmful. Thus, this study's objective was to estimate the association between San Francisco's ban on flavored tobacco product sales and smoking among high school students younger than 18 years.

Methods | Data came from the 2011-2019 Youth Risk Behavior Surveillance System (YRBSS) biennial school district surveys, with consideration restricted to districts with representative...
smoking data (with response rates ≥60%) available through the US Centers for Disease Control and Prevention for each wave: New York City, New York; Broward County, Florida; Los Angeles, California; Orange County, Florida; Palm Beach County, Florida; Philadelphia, Pennsylvania; and San Diego, California, as well as San Francisco, California. This analysis focused on high school students younger than 18 years who had nonmissing data for the outcome of interest: a binary indicator for recent (ie, past 30-day) smoking. This study was deemed exempt from institutional review board review under US federal regulation 45 CFR 46.101(b)(4). The analysis used publicly available YRBS data, a survey with collection procedures designed to maintain student anonymity; therefore, informed consent was not required.

A binary exposure variable captured whether a complete ban on flavored tobacco product sales was in effect in the respondent’s district on January 1 of the survey year. (The YRBSS is fielded during the spring semester and does not report interview dates; further details are in the eMethods in the Supplement.) Recent vaping was not considered because of likely confounding. California legalized recreational marijuana use the same year San Francisco’s flavor ban went into effect; in addition, the YRBSS’s vaping questions did not distinguish vaping nicotine vs marijuana.

Covariates captured age, sex, and race/ethnicity fixed effects and tobacco policies on January 1 of the survey year (specifically, state-plus-district conventional cigarette taxes and indicators for smoke-free restaurant laws). San Francisco did not implement other new tobacco control policies between the 2017 and 2019 surveys. To compare trends, annual sample-weighted means and 95% CIs were plotted for recent smoking in San Francisco vs other districts. Difference-in-differences analyses used logistic regressions to estimate changes in recent smoking in San Francisco relative to other districts, before vs after the flavor ban’s implementation, adjusting for year and district fixed effects alongside the aforementioned demographic and policy covariates. Robustness checks further adjusted for district-specific time trends and considered California districts only, to ensure uniform state policy exposure. Two-tailed $P$ values less than .05 were considered significant. Data were analyzed from February 2021 to March 2021 using Stata version 14 (StataCorp).

**Results**  The data set yielded an analytic sample of 100,695 minors, 95,843 of whom had nonmissing data on recent smoking. Among those with data, 9,225 respondents came from San Francisco vs 86,618 from other districts, with weighted means indicating smoking rates of 6.2% (95% CI, 5.2%-7.1%) and 5.6% (95% CI, 5.3%-5.9%), respectively. Comparing recent smoking rates by wave revealed similar trends in San Francisco vs other districts prior to 2018 but subsequent divergence (2019: San Francisco, 6.2% [95% CI, 4.2%-8.2%]; other districts, 2.8% [95% CI, 2.4%-3.1%]; Figure 1). Difference-in-differences analyses found that San Francisco’s flavor ban was associated with more than doubled odds of recent smoking among underage high school students relative to concurrent changes in other districts (adjusted odds ratio, 2.24 [95% CI, 2.01-2.49]).

| Source | Sample, No. | Adjusted OR (95% CI) | Decreased odds of recent smoking | Increased odds of recent smoking | $P$ value |
|--------|-------------|----------------------|-------------------------------|-----------------------------|----------|
| Main regression | 95,843 | 2.24 (1.42-3.53) | 2.8% (2.4%-3.1%) | 6.2% (5.2%-7.1%) | <.001 |
| Adjusted for district-specific time trends | 95,843 | 2.32 (1.45-3.70) | 2.8% (2.4%-3.1%) | 6.2% (5.2%-7.1%) | <.001 |
| California districts only | 24,273 | 2.01 (1.15-3.51) | 2.8% (2.4%-3.1%) | 6.2% (5.2%-7.1%) | .01 |

Adjusted odds ratios (ORs) and 95% CIs describe difference-in-differences estimates for the association between the ban in San Francisco, California, on flavored tobacco product sales and youth smoking. Specifically, sample-weighted logistic regressions compare youth smoking in San Francisco before vs after its ban on sales of flavored tobacco products went into effect, with concurrent trends in smoking among respondents in the other sites (a difference-in-differences research design). Analyses use 2011-2019 Youth Risk Behavior Surveillance System data on minor respondents from 8 districts: Broward County, Florida; Los Angeles, California; New York City, New York; Orange County, Florida; Palm Beach County, Florida; Philadelphia, Pennsylvania; San Diego, California; and San Francisco, California. The robustness check of California districts only limited consideration to districts in that state. All regressions were adjusted for demographic covariates (age, sex, and race/ethnicity fixed effects), the conventional cigarette tax rate, and a binary indicator for whether the district had a smoke-free restaurant law at a given wave, as well as year and district fixed effects. Analyses were adjusted for complex survey design.
Discussion | San Francisco’s ban on flavored tobacco product sales was associated with increased smoking among minor high school students relative to other school districts. While the policy applied to all tobacco products, its outcome was likely greater for youths who vaped than those who smoked due to higher rates of flavored tobacco use among those who vaped. This raises concerns that reducing access to flavored electronic nicotine delivery systems may motivate youths who would otherwise vape to substitute smoking. Indeed, analyses of how minimum legal sales ages for electronic nicotine delivery systems are associated with youth smoking also suggest such substitution. This study’s primary limitation is generalizability. Future research should assess whether estimates hold over time and in other localities and consider how policy heterogeneity (eg, retailer exemptions) modifies such bans’ outcomes.

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COMMENT & RESPONSE

Dried Blood Spot Testing for Detection of Congenital Cytomegalovirus

To the Editor | We read with great interest the study performed by Dollard et al entitled “Sensitivity of Dried Blood Spot Testing for Detection of Congenital Cytomegalovirus Infection.” In this study, more than 12 000 children were screened for congenital cytomegalovirus (cCMV) infection by detection of DNA by CMV–polymerase chain reaction (CMV-PCR) in saliva and in dried blood spots (DBS).

Authors stated that CMV-PCR in DBS has a high sensitivity and has the potential to be used as a screening method, but some points of this work should be highlighted. On the one hand, sensitivity of the CMV-PCR in saliva (dried swab) was used as the criterion standard was not close to 100% (92.9% of sensitivity when compared with DBS). Other studies performed in saliva have shown a sensitivity very close to 100% with a similar technique. On the other hand, sensitivity of CMV-PCR in DBS was 73.2% (95% CI, 60.4%-83%) and 76.8% (95% CI, 64.2%-85.9%) in 2 different laboratories, so 1 of 4 children with cCMV were not diagnosed by this method in each laboratory. In 2017, we screened more than 3000 children in the Madrid area at birth by quantitative real-time CMV PCR (qPCR) in saliva samples (Veris Human Cytomegalovirus Assay; Beckman Coulter Diagnostics). The diagnosis was confirmed by qPCR in urine within the first 2 weeks of life. Fifteen newborns had a positive qPCR test result (0.47%; 95% CI, 0.29%-0.77%). The CMV blood viral loads were performed in all children in the first 2 weeks of life, and 6 of 15 (40%) had levels at less than the detection limit (<120 IU/mL). We do not know if this high proportion of children with negative viral load at birth was associated with a high proportion of nonprimary CMV infections during pregnancy in our cohort (10 of 14; 71.4%). We performed viral load in DBS in 9 of those children with cCMV, and it was detectable only in 3 of 9 (33%). We also performed magnetic resonance imaging in 6 newborns with undetectable viral load in DBS, and 3 showed white-matter abnormalities. We followed up all 6 for an average of 35.8 months, and 1 infant with white-matter abnormalities developed epilepsy at age 2 years (1 of 6). We agree with the authors that massive screening with CMV-PCR in DBS is cheaper and more feasible than in other samples, but it shows a clear sensitivity limitation, even when performed in most advanced laboratories. We think that saliva is the optimal technique for large-scale CMV screening at birth.

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