

EDITORIAL

New Tobacco Products with Fewer Advertising Restrictions and Consequences for the Current Generation of Youths

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In this issue of *JAMA Pediatrics*, Pierce et al¹ show that adolescents and young adults (AYAs) who report a favorite tobacco product advertisement, recall having seen a tobacco advertisement, or report liking a tobacco advertisement were more likely to initiate use of tobacco products 1 year later.



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This prospective association was observed across various products, including (for the first time to our knowledge in a national sample) electronic cigarettes (e-cigarettes) and other noncigarette tobacco products.

During the last decade, there has been a dramatic shift in the tobacco product marketplace. Noncigarette products, including e-cigarettes, hookah (tobacco water pipe), and small cigars, occupy a considerable segment of overall tobacco product sales in the United States, particularly among the AYA population. Electronic cigarettes in particular have gained rapid popularity among AYAs during the last several years and remain the most commonly used tobacco product in this age group,² with substantially higher rates of use in the AYA population relative to adults older than 25 years.³ While numerous risk factors for noncigarette tobacco product initiation have been established,⁴ until now there has been limited evidence⁵⁻⁸ on whether advertising for noncigarette products plays a role in AYA use initiation.

The findings of Pierce et al¹ are important for policy and prevention aimed at protecting current and future generations of AYAs. As a result of the Master Settlement Agreement and the Family Smoking Prevention and Tobacco Control Act (Public Law 111-31, 61 Fed Reg 44615-44618), there are regulatory safeguards in place that restrict marketing of combustible cigarettes. Advertisements for combustible cigarettes at the point of sale or in magazines with significant teenage readership that include images of people (for example, the Marlboro Man) or cartoon images (such as the now-retired Joe Camel) are prohibited. Combustible cigarettes in characterizing flavors that may disproportionately attract AYAs (eg, strawberry, grape, orange, clove, cinnamon, pineapple, vanilla, coconut, licorice, cocoa, chocolate, cherry, or coffee) are no longer allowed on the market. These marketing restrictions are notably absent for the growing market of alternative tobacco products, including e-cigarettes.⁹ As a result, e-cigarettes are commonly marketed in youth-oriented flavors (eg, Skittles; **Figure**, A) and with youth-oriented packaging, including the use of cartoon-like images¹⁰ (eg, Unicorn Puke; **Figure**, B). When exposed to e-cigarette advertisements with youth-oriented flavors and themes, evidence suggests that adolescents are more interested in trying e-cigarettes.¹¹ Although

Figure. Electronic Cigarette Labels

A Youth-oriented flavors



B Youth-oriented packaging



Examples of e-liquid solutions available in youth-oriented flavors (A) and packaging, including the use of cartoon images (B).

the Pierce et al study¹ did not assess exposure to advertisements explicitly via social media, the high rates of AYA use of social media and rapid dissemination of formal and informal product marketing via social media channels raises further concern regarding the association of social media advertising with youth initiation of noncigarette tobacco products.

A key finding of Pierce et al¹ was that, among AYAs who may not have been receptive to advertisements for combustible cigarettes, those who had seen or liked an e-cigarette advertisement were more likely to have initiated combustible cigarette smoking by follow-up. Although causal inferences cannot be made given the observational nature of this study, the potential for “cross-product” pathways where exposure to a noncigarette tobacco product advertisement may increase risk of combustible cigarette initiation raises an unprecedented concern for adolescent tobacco control.

While the long-term health effects of e-cigarette use are still unknown, early evidence to date indicates that exposure to e-cigarette aerosol is likely to be less toxic than combusted tobacco smoke.¹² Based on this result, regulatory policies that discourage combustible cigarette smoking in the population, including encouraging smokers to switch completely to e-cigarettes, may help to reduce the tobacco-related disease burden in adult long-term smokers who otherwise would be unwilling to quit regular use of nicotine. Having a variety of e-cigarette flavors may be important to former smokers who made the switch to vaping. However, the Pierce et al¹ results and other extant work⁵⁻⁸ raise concern that exposure to marketing of noncigarette products (eg, e-cigarettes) in flavors and with marketing themes that are clearly targeting youths may not only increase AYA uptake of that product, but also of com-

combustible cigarettes, leading to a greater population burden of combustible tobacco-related morbidity and mortality. This finding, in conjunction with evidence that e-cigarette use increases the risk of initiation and progression of combustible tobacco product use in AYAs,^{13,14} reinforces a regulatory dilemma surrounding e-cigarettes and the tradeoffs between the potential for harm reduction among adult smokers and adverse consequences among AYAs.

Electronic cigarettes are not the only noncigarette product associated with increased likelihood of combustible cigarette smoking in AYAs,¹⁵ and advertising receptivity was associated with use of cigars, hookah, and smokeless tobacco in Pierce et al.¹ Similar to e-cigarettes, cigars and hookah are available in youth-friendly flavors, and their use in the adolescent population is appreciable.²

Pierce et al¹ reinforce what we might expect. We have known for decades that advertisements for combustible cigarettes and other health-damaging products (eg, high-sugar foods) are effective in recruiting a new, younger customer base. The same principles apply to noncigarette tobacco products. The marketing of such products in youth-friendly flavors or packaging may enhance the risk of exposure to advertisements that promote use initiation of both noncigarette tobacco products and combustible cigarettes, posing a threat to the public health of this generation of adolescents and young adults.

ARTICLE INFORMATION

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