Pediatricians' Answer to the Vaping Epidemic? Prevention.

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Pediatricians fill a unique role in a teen's life. Their personal relationships with patients and parents allows them to deliver reliable advice based on teens' needs and their specific family situations. But the recent growth of e-cigarette use among teens has presented new and unique challenges for providers. We want to help protect children from harm and promote well-being, yet we lack evidence-based strategies for how to address e-cigarette use in practice.

In January, a new survey with middle and high school students—a population with rapid growth in e-cigarette use—revealed interesting findings: More than half of current e-cigarette users had tried to quit in the last year and more than half were thinking about quitting. This desire to quit highlights both an opportunity for providers and an urgent need for evidence-based solutions to help teens succeed. We recently embarked on a project to look more closely at how providers could address this issue in their day-to-day interaction with teens.

Treatment Starts with Screening, But Traditional Approaches Are Unlikely to Identify At-Risk Youth

Within Children's Hospital of Philadelphia's primary care network, we incorporated adolescent e-cigarette screening into all routine well-child visits for patients ages 12 or older, asking them: "in the past year, have you used a tobacco product, like cigarettes, e-cigarettes (vaping devices such as tanks, mods, or Juul), or cigarillos (little cigars)?" If teens said yes, we asked them which products they use and how frequently. Over the course of about a year, we screened more than 56,000 adolescents for e-cigarette and tobacco use at their doctors' visits. Surprisingly, across all practices only about 1% reported use—a stark contrast to school-based national estimates of current use.

Based on this analysis, simply asking teens about e-cigarette use during a preventive visit does not appear to reliably identify at-risk youth. Even in practices that ensured privacy and confidentiality—meaning trusted providers asked questions in a private setting, without the parent present, and explained confidentiality to the patient and parent—the current approach to screening did not lead teens to be truthful about their e-cigarette use.

One potential solution could be using electronic questionnaires for screening. While not yet validated as an approach for identifying e-cigarette use in particular, studies among adolescents in related areas suggest electronic screeners promote discussion of potentially sensitive topics between providers and teens at preventive care visits.

Results from electronic questionnaires could be combined with electronic health record decision support tools to prompt discussions of positive results between teens and providers. Finally, this approach may also take less time for both patients and clinicians compared to the current face-to-face standard.

As the vaping epidemic has grown, we have increasingly received questions from schools, parents and colleagues looking for answers on how to help teens. Unfortunately, we just don't have concrete treatment recommendations to share yet. In fact, there is not a single randomized controlled trial that has tested strategies to help teens quit e-cigarettes, and while new strategies are emerging, more research is needed. Further, it is unclear whether lessons learned in treating teen cigarette use can be applied to e-cigarettes. Neither medical nor behavior-based treatments have yet proven effective for use among adolescents and little research has been done to assess the effectiveness of pharmacologic therapies that have been highly effective in adults. Further, adolescent adherence to treatment is low, meaning medication may not be as effective.

So What Can We Do?

Given that teens may not be transparent in disclosing e-cigarette use, combined with little evidence to guide treatment, a universal prevention-focused strategy may be the most effective approach starting early in middle school before teens begin use. The U.S. Preventive Services Task Force (USPSTF) recommends that pediatricians provide education or counseling to prevent school-aged children and adolescents from starting to use traditional tobacco products. This approach consistently leads to a small but meaningful reduction in smoking initiation.

Applying those lessons learned to e-cigarettes, pediatric clinicians can educate patients and families about the direct health harms of e-cigarettes, including damage to brain development and respiratory health, and the strong connection between e-cigarettes and use of cigarettes. Furthermore, the vast majority of e-cigarette companies are partly or entirely owned by tobacco companies. Emphasizing these financial relationships—and the long history of the tobacco industry deceptively targeting youth—may complement larger public health counter-promotion efforts.

E-cigarette use among teenagers is widely prevalent and strongly associated with the leading preventable cause of disease and death in the United States—smoking cigarettes. Our observations over the course of this project can help guide pediatricians as they address e-cigarette use in practice. Focusing on screening via electronic questionnaires and providing education on the harmful effects of e-cigarettes could help prevent initiation. However, prevention efforts should likely focus on all teens to reach those who don't disclose vaping to their provider. Additional research on what works with teens is necessary to slow the e-cigarette epidemic and to prevent teens from the harms of tobacco.

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