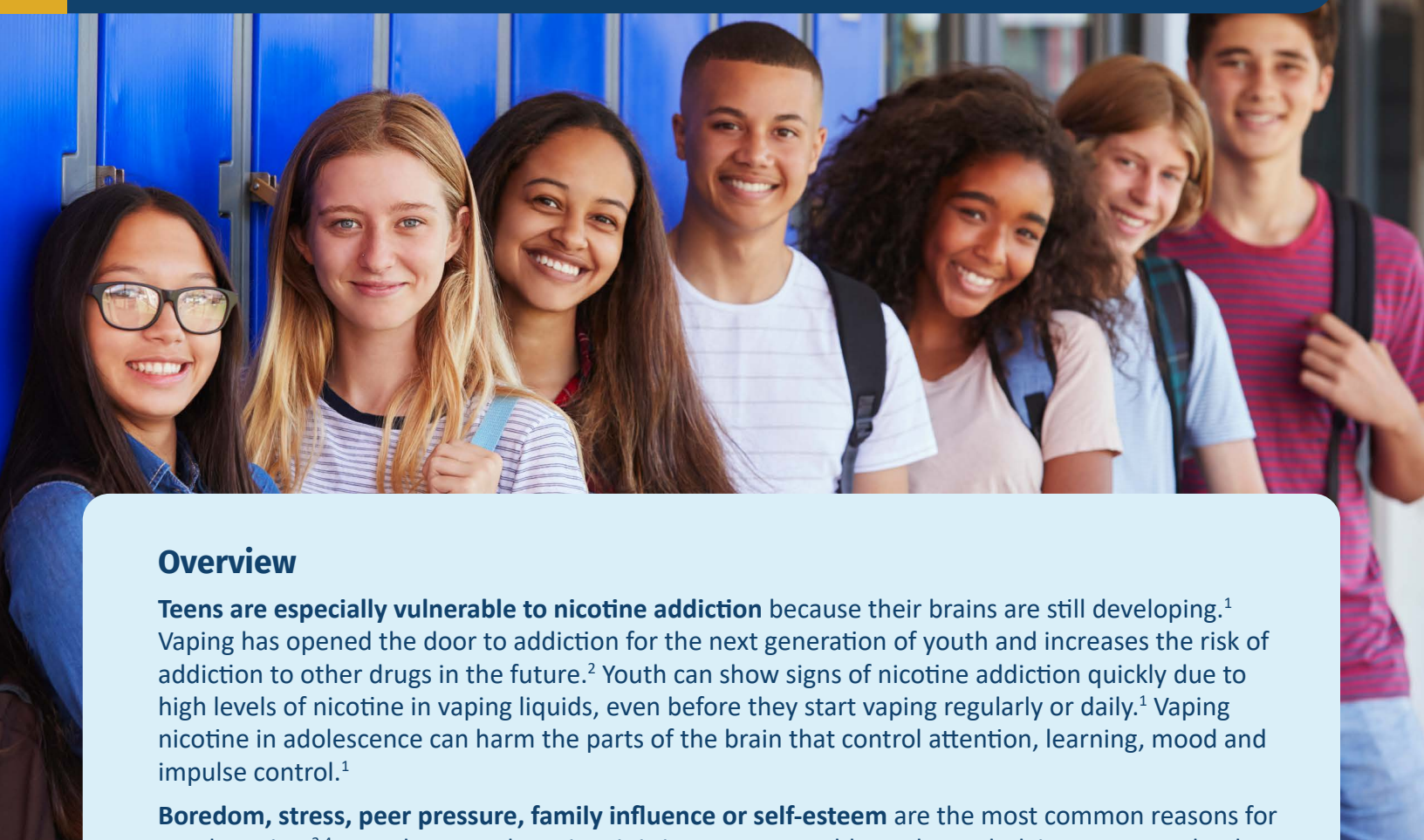


Re-evaluating Vape Detectors and Punitive Responses to Vaping in K-12 Schools



Overview

Teens are especially vulnerable to nicotine addiction because their brains are still developing.¹ Vaping has opened the door to addiction for the next generation of youth and increases the risk of addiction to other drugs in the future.² Youth can show signs of nicotine addiction quickly due to high levels of nicotine in vaping liquids, even before they start vaping regularly or daily.¹ Vaping nicotine in adolescence can harm the parts of the brain that control attention, learning, mood and impulse control.¹

Boredom, stress, peer pressure, family influence or self-esteem are the most common reasons for youth vaping.^{3,4} To reduce youth vaping, it is important to address the underlying reasons why they turn to vaping while providing education and treatment.

Many K-12 schools have turned to punitive measures, like suspension and vape detectors to address student vaping as it has become more common. Research shows that punishment is not the most effective way to stop vaping in schools. Vape detectors are often used in restrooms to monitor vaping, but there is **no clear evidence that vape detectors reduce vaping** among students.

The Impact of Punitive Discipline on Student Behavior

Suspensions and other punitive measures are not effective strategies for reducing vaping because they do not address the root causes of vaping or nicotine addiction.^{5,14} Punitive discipline aims to stop the behavior but does not help students understand or cope with the reasons behind their actions.

Suspension and expulsion can harm students by increasing the likelihood of dropping out of school, antisocial behavior and further tobacco or other drug use.⁶ Suspension results in lost time in class and negatively impacts academics overall.

Students may feel too afraid to seek help or talk about quitting when they are punished for vaping. This leads them to hide their behavior instead of seeking support.⁷

The Social and Emotional Impact of Punitive Discipline



Students may feel disconnected from their peers and school community when they are suspended or punished.⁸ This can increase feelings of stress, making it harder to stop behaviors like vaping. The stigma of vaping and seeking treatment can make it harder for them to re-engage in school activities and seek support.⁹



E-cigarette use is associated with poor mental health including mood and anxiety disorders, suicidal ideation, and symptoms of depression.¹⁰ At-risk students benefit from an approach that provides extra support rather than using exclusionary approaches.



Many students caught vaping react to punishments with anger and resistance. Taking a supportive approach to behavior change that explores their reasons for vaping and ambivalence about quitting could enhance student openness and motivation to quit.



Students of color are more likely to be suspended or face other punishments compared to white students for doing the same behavior. This creates a cycle of inequity that can affect students' academic success and emotional well-being.¹¹

The Long-term Impact of Punitive Discipline

Suspensions may impact students' overall development into adulthood. Students with a record of suspensions have lower test scores, academic success overall and graduation rates.⁷ They also have a harder time being accepted into postsecondary institutions.

Punitive discipline for vaping may lead to legal issues—such as a fine, civil infraction or misdemeanor—which further limits the student's chances for success.¹²

Vape Detectors: Considerations for Schools

There is not enough data to conclude that vape detectors are successful in reducing youth vaping. Existing data on their effectiveness is very limited.

Vape detectors are expensive and require ongoing maintenance, which can strain school budgets and resources.¹³

Students may feel that vape detectors invade their privacy, which could lead to strained relationships between students and staff.¹⁴

Vape detectors sometimes give false alerts, which can create unnecessary disruptions and lead to situations where students are wrongly punished.

A Supportive Approach: Helping Students Quit Vaping

Using a supportive approach means exploring the reasons why students vape and helping them make healthier choices.¹⁵

Offering counseling, educational resources and access to tobacco dependence treatment programs, (commonly referred to as quit programs) can create a safe space for students to talk about their struggles and start their journey toward quitting vaping.^{11,15} Schools can connect students with free quit programs to provide support with quitting.

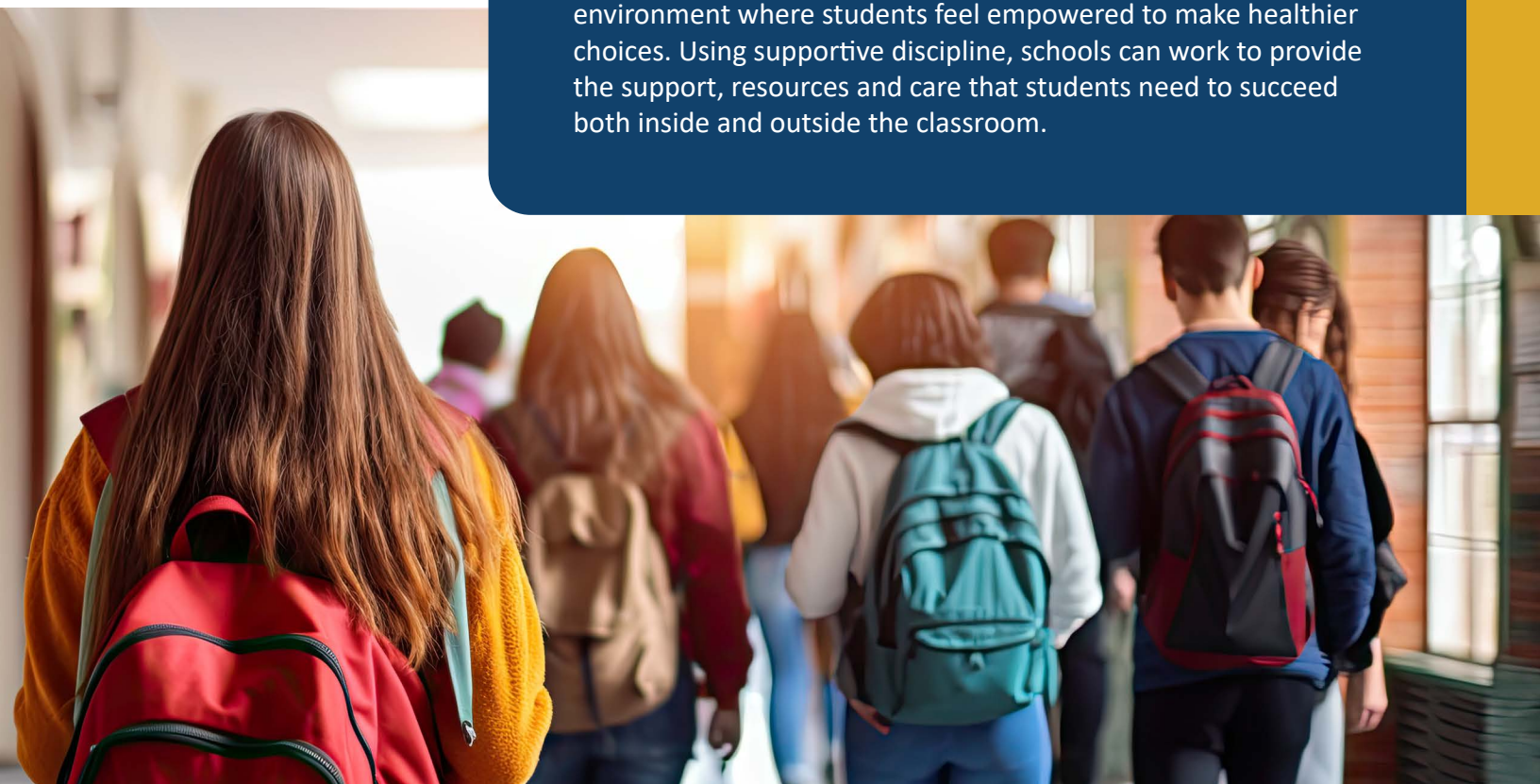


Request Technical Assistance

The Michigan Department of Health and Human Services offers free training and technical assistance for K-12 schools to implement supportive discipline measures for students caught vaping or using other tobacco or nicotine products. This includes recommendations for curricula and other educational resources, model policy and code of conduct language, and quit programs including My Life, My Quit™. To learn more or request support, visit Michigan.gov/Tobacco, email MDHHS-TobaccoSection@michigan.gov or call 517-335-8376.

Conclusion

By moving toward a more supportive, understanding approach to vaping and discipline, schools can create a safer, more inclusive environment where students feel empowered to make healthier choices. Using supportive discipline, schools can work to provide the support, resources and care that students need to succeed both inside and outside the classroom.



References

- ¹US Department of Health and Human Services. (2016). E-Cigarette Use Among Youth and Young Adults-A Report of the Surgeon General.
- ²Yuan, M., Cross, S. J., Loughlin, S. E., & Leslie, F. M. (2015). Nicotine and the adolescent brain. *The Journal of physiology*, 593(16), 3397-3412.
- ³Patrick, M.E., Terry-McElrath, Y.M., Arterberry, B., & Miech, R.A. (2024). Reasons for vaping among US adolescents. *PEDIATRICS*, 154(6).
- ⁴Jha, V., & Kraguljac, A. (2021). Assessing the Social Influences, Self-Esteem, and Stress of High School Students Who Vape. *The Yale journal of biology and medicine*, 94 (1), 95-106.
- ⁵Schroeder, A. C. (2023). An Investigation of the Response by Arkansas Administrators to Students Vaping in Their Schools (Doctoral dissertation, Arkansas Tech University).
- ⁶Hemphill, S. A., Heerde, J. A., Herrenkohl, T. I., Toumbourou, J. W., & Catalano, R. F. (2012). The impact of school suspension on student tobacco use: a longitudinal study in Victoria, Australia, and Washington State, United States. *Health Education & Behavior*, 39(1), 45-56.
- ⁷Bold, K. (2022). School-based E-cigarette cessation programs: What do youth want? *Addictive Behaviors*, 125.
- ⁸Popova, L. (2021). " You have to vape to make it through": E-cigarette outcome expectancies among youth and parents. *American Journal of Health Behavior*, 45(5), 933-946.
- ⁹Weinstein, D., Jones, E., Endrighi, R., Hart, J. L., Walker, K. L., Borrelli, B., & Quintiliani, L. M. (2024). "I knew the effects the whole time." Examination of facilitators and barriers to quit vaping among adolescents. *Addictive Behaviors*, 157, 108087.
- ¹⁰Pham, T., Williams, J. V., Bhattarai, A., Dores, A. K., Isherwood, L. J., & Patten, S. B. (2020). Electronic cigarette use and mental health: a Canadian population-based study. *Journal of affective disorders*, 260, 646-652.
- ¹¹Liu, J. (2023). An urgent need for school-based diversion programs for adolescent substance use: a statewide survey of school personnel. *Journal of Adolescent Health*, 73(3), 428-436.
- ¹²Youth Tobacco Act, MCL 722.642
- ¹³Okoh, C. (2024). Dangerous Data: What Communities Should Know about Artificial Intelligence, the School-to-Prison Pipeline, and School Surveillance. Center for Law and Social Policy, Inc.(CLASP).
- ¹⁴Kim, J. (2025). Case Study Describing Alumni's Perceptions of High School Interventions for Electronic Nicotine Delivery Systems (ENDS) [Doctoral dissertation, Youngstown State University]. OhioLINK Electronic Theses and Dissertations Center.
- ¹⁵Pbert, L., Dubé, C. E., Nagawa, C. S., Simone, D. P., Wijesundara, J. G., & Sadasivam, R. S. (2024). Vaping cessation support recommendations from adolescents who vape: a qualitative study. *BMC Public Health*, 24(1), 1615.