



Minnesota State University Moorhead
RED: a Repository of Digital Collections

Dissertations, Theses, and Projects

Graduate Studies

Spring 5-10-2024

Vaping in the Schools: A training for educators

Samantha McDaniel
samantha.mcdaniel@go.mnstate.edu

Follow this and additional works at: <https://red.mnstate.edu/thesis>

Researchers wishing to request an accessible version of this PDF may [complete this form](#).

Recommended Citation

McDaniel, Samantha, "Vaping in the Schools: A training for educators" (2024). *Dissertations, Theses, and Projects*. 909.

<https://red.mnstate.edu/thesis/909>

This Project (696 or 796 registration) is brought to you for free and open access by the Graduate Studies at RED: a Repository of Digital Collections. It has been accepted for inclusion in Dissertations, Theses, and Projects by an authorized administrator of RED: a Repository of Digital Collections. For more information, please contact RED@mnstate.edu.

Vaping in the Schools: A training for educators

A Training Presented to the Graduate Faculty of
Minnesota State University Moorhead

By Samantha McDaniel

In Partial Fulfillment of the Requirements for the Degree of Master of Science in School
Counseling

March 2024
Moorhead, Minnesota

Abstract

Since 2007, when vapes hit the United States tobacco market, adolescents have increasingly been a targeted population. Recently, anywhere from 1 in 5 to 1 in 4 high school students have reported using e-cigarettes (EC) or vapes (Rohde, Vereen, and Noar, 2021). With high levels of nicotine in vaping products such as JUUL, reaching the equivalent of 20 traditional combustible cigarettes (TCC) per pod and delivering nicotine at a 1.3 to 1.7 times faster rate than TCC, the concern and fear of adolescent nicotine addiction has reached epidemic levels (Kelder et al, 2020). Schools are ideal locations for EC and vape prevention and cessation as students not only are highly exposed to products at school, but they also gain a lot of their perceptions, knowledge, and beliefs on vaping from their peers at school (Garder et al, 2023). Programs like CATCH My Breath are specifically designed for classroom education on vaping with a targeted audience of fifth grade and up, while concepts like alternatives-to-suspension focus on getting student help for their addiction rather than discipline. Together, teachers, administration, school counselors, and other school staff can help address the high concerns of adolescents vaping, and ideally make a difference in the alarming statistics.

Keywords: vaping, schools, prevention

Table of Contents

Title Page.....	1
Abstract.....	2
Table of Contents.....	3
Introduction.....	4
Literature Review.....	7
Introduction.....	7
Prevalence in the Schools.....	9
Areas of Influence.....	11
Cessation and Prevention Programs.....	14
Role of Counseling.....	18
Conclusion.....	19
Presentation Outline.....	21
Training/Presentation Overview and Preparation.....	23
Presentation.....	24
Training Evaluation.....	90
Reference Page.....	91

Introduction

Electronic Cigarettes (EC) entered the market in 2007 as a means of quitting traditional combustible cigarettes (TCC) and making smoking more socially acceptable. Since the early 2000s, ECs and vapes have increased in use among adolescents in junior high and high school settings across the world. ECs and vapes are slightly different in design but similar in use and often used interchangeably in context. Typically, slimmer and battery operated, ECs use a nicotine cartridge, and similarly to vape pods, have a heating mechanism to heat a water vapor and dispense the aerosol. While ECs tend to resemble TCC, vapes are more diverse in design ranging from thin, square devices that resemble a thumb-drive to triangular models. Different brands, such as JUUL, UWell and SMOK, some of the top selling companies, makeshift different designs as promotional context but also as newer models to contain more nicotine, dispense higher amounts and last longer.

While ECs and vapes were introduced to the tobacco industry as a means of quitting TCC or making smoking more socially acceptable, they pose a similar threat to TCC use and target a younger population with fruity flavors, marketing strategies and unique designs specific for the younger population. Like TCC, nicotine is common in ECs and vapes, along with other chemicals present in the aerosols. Vapes are also known to house THC or marijuana, which is a growing concern as more and more states legalize recreational marijuana. In addition to harmful chemicals entering the body, particularly the lungs and brain, ECs' and vapes' heating mechanisms in earlier models posed burning threats. Other areas of concern are the amount of nicotine users consume. Pods or cartridges are the reusable or disposable pieces of an EC or vape that contain the nicotine and other chemicals. Newer models allow users to put other substances such as THC in them. While some pods are merely flavoring and state to contain no nicotine,

others contain high doses of nicotine sometimes equivalent to 20 TCCs and deliver 1.3-2.7 times faster than TCCs (Hadlan, and Chadi, 2020 & Kelder et al, 2020).

Some newer models allow users to control the amount of nicotine they consume with each puff. While in theory, the concept of ECs and vapes have been known to assist TCC users to change their smoking habits, the introduction of these products to the tobacco market also increased the trend of adolescents taking up smoking. Though research is still being conducted, EC and vapes are viewed as a 'gateway' into TCC use and with only 11-23% of current EC and vape users being predicted as TCC users, this suggests that more adolescents are taking up smoking who normally would not have (Becker and Rice, 2022).

ECs and vapes pose a large threat to adolescents for multiple reasons. Statistics show that adolescents who use ECs or vapes are more likely to take up TCC or other substances such as marijuana than their counterparts who do not use. Though restrictions on the sales and advertising of TCCs have improved and made a dent in the use of traditional tobacco products, tobacco use remains one of the top avoidable causes of death (Shan and Azagba, 2022). Known health concerns such as COPD, cancer, lung damage and other risks associated with TCCs use are cause for concern among current users, but also among adolescents who have never used TCC yet vape or use ECs. Vapes and ECs pose their own threats with cardiac and respiratory issues, impacts on the brain development, mental health, and nicotine addiction (Liu, Gaiha, and Halpern-Felsher, 2020).

Nicotine is a stimulant drug that is highly addictive with withdrawal symptoms onsetting only two to three hours post last use (Heishman, Kozlowski, and Henningfield, 1997). Nicotine symptoms have a wide range of effects on individuals, from increased heart rate and relaxation or vomiting and stomach cramps. (Sherwood, 993). The quick onset of withdrawal can last for

weeks, making the quitting process of nicotine very challenging often resulting in relapse. Nicotine use in adolescents is especially concerning as it affects the process in which the developing brain builds synapses. Since a young brain develops synapses faster than a mature brain, addiction can actually form quicker in adolescents (Ren, and Lotfipour, 2019).

Electronic cigarette or vaping-associated acute lung injury or EVALI is a newer concern that presented itself in vaping users in 2019. This disease is a result of vaping and affects the lungs (Becker and Rice, 2022). Some sources account EVALI to vitamin E acetate in the lungs which is connected to THC oils not the nicotine and vapors found in EC or vape pods. Other definitions account EVALI as a severe lung disease that leads to hospitalization or death by harmful chemicals of a number of natures in the lungs. Since vapes and ECs involve inhaling chemicals at great amounts or frequencies, the likelihood of those chemicals and vapors causing damage to the sensitive cells and tissues of the human lung are very high.

EC and vape use continue to rise among adolescents. Recently, anywhere from 1 in 5 to 1 in 4 high schoolers have been reported using (Rohde, Vereen, and Noar, 2021). Unfortunately, schools become a hot spot for EC and vape exposure, along with a trending area of use. School bathrooms are a common location for students to vape during the day, with some students even vaping during class time. Despite educators already being stretched thin and being asked to perform nontraditional tasks, educators and school staff also play a key role in EC and vaping prevention and cessation.

Adolescents spend on average 6.6 hours in a school setting during the day in the United States (Dai et al, 2021). Currently multiple organizations are attempting to implement school programs that target vaping prevention such as the CATCH My Breath program out of Texas and the Center for Disease Control and Prevention's (CDC) and Substance Abuse and Mental Health

Services Administration's (SAMHSA) guidelines for schools, however not enough research is available to know which approach is most successful and beneficial (Dai et al, 2021). Teachers, paras, administration, counselors, and other school staff play an important role in any approach adapted to the school as so many students form relationships with school personnel. Each personnel also play a different role in the prevention and cessation of adolescent vaping, whether they be policy makers and enforcers, educators or actively involved with a student's journey, each role is influential. Therefore, it is crucial for schools to adapt a vaping and substance prevention program along with having knowledge of cessation plans.

Literature Review

Introduction

In 2019, 10.5% to 27.5% of adolescents (11 to 19) engaged in Electronic Cigarettes (EC) or vaping (Mantey et al, 2021). This current amount of use among adolescents is reason for concern among educators, professionals, and clinicians. Obvious health concerns such as electronic cigarette or vaping-associated acute lung injury (EVALI), brain development damage and other physical ailments are worrisome but also the mental health concerns, including depression, anxiety and especially addiction in young people are becoming more of a concern. In addition, those who use ECs or vaping products are more likely to take up combustible smoking (traditional cigarettes), despite using non-tobacco products, which is still linked as one of the highest avoidable causes of death (Lippert, Corsi, and Venechuk, 2019 & Wang et al, 2020)

With marijuana entering the legal market in more and more states, society is facing a new concern among adolescents' EC and vape usage: What is in the vapes? One study conducted in

2015 asked junior high and high school students whether they were inhaling nicotine, marijuana, only flavoring, another substance or if they did not know (Miech, Patrick, O'Malley et al., 2017). At the time, majority of users reported using only flavored pods, but unfortunately with tobacco products increasing the amount of nicotine and making it easier to use their products the likelihood of adolescence nicotine uses, and addition is on the rise (Liu, Gaiha, and Halpern-Felsher, 2020). Despite this report, 65% of vapes directly sold to adolescents contain nicotine (Dube et al, 2023). Regardless of the 2019 change in legal purchase of tobacco age from 18 to 21 in the United States, most adolescents are able to purchase EC or vape products on their own whether from a dispensary or local store, such as a gas station, or online (Braak et al, 2020). Security measures online are easily bypassed resulting in easy access to vapes and vaping products such as refills. Additionally, the 2017 ITC Youth Tobacco and Vaping survey stated that 10-20% of adolescents who use in the last 30 days reported giving money to someone else as means to purchase vaping products for themselves (Braak et al, 2020). This presents a clear concern in not only the use of vaping but the means that adolescents have access to the products.

Current prevention and cessation programs available for agencies and schools to assist in the decline of EC and vape use are limited. Many of these programs are tailored from research on TCC programs or simply modified from their original outline (Liu, Gaiha, and Halpern-Felsher, 2020). While this is the best data available to create programs from, when developing prevention or cessation programs geared towards adolescents and/or vaping other factors need to be considered. Strategies need to address product flavors, the misperceptions of risk about the product along with peer and social norms and beliefs on vaping (Liu, Gaiha, and Halpern-Felsher, 2020). Marketing also needs to be addressed in prevention programs as vaping

and EC marketing differs from other tobacco products, along with the new trends of social media marketing and the direct target audience being younger.

EC and vape usage are still far too new to clearly research and document the full nature of harmful damages the devices can cause along with what methods work best in prevention and cessation. Several projects have gathered data from adolescents on potential options for prevention and cessation, while other programs have been tested in the field. A common thread among all areas of research is relationship building, behavioral changes and consistency.

Prevalence in the Schools

A 2020 study conducted in a Connecticut high school reported 45% of the last 30-day EC use among adolescents was on school campus (Mantey, 2021). With this rate of on campus usage comes a degree of environmental exposure. When students on the Connecticut high school campus were asked to report on the level of exposure, 64.3% or 2 out of 3 students, reported exposure on the school campus (Mantey, 2021). Furthermore, the study also discovered that common areas of exposure on the school campus were the bathrooms, locker rooms or parking lot, all commonly used locations by all students. Students who may not otherwise be exposed to ECs or vapes now are at risk due to peers' usage. Since adolescents are highly vulnerable to behavior modeling, on campus exposure may reflect environmental factors when looking at the rise and fall of EC and vape usage (Mantey, 2021).

Another study conducted over the span of six years, 2011 to 2017, researched the role of schools across the United States in student's decisions to start vaping (Lippert, Corsi, and Venechuk, 2019). Using the Ecological Systems Theory as a foundation for the study, researchers found many factors can play a role in an adolescent's decision to vape. Youth

development is impacted by exosystems and macrosystems, which consider public policies, culture, and large trends along with microsystems. Microsystems are smaller, unique systems within adolescents' social circles, like schools, families, and peers (Lippert, Corsi, and Venechuk, 2019).

When observing adolescents' decision to take up vaping, both exosystems and macrosystems along with microsystems play an effect. Restrictions and governed rules over age and sales on tobacco are at a macrosystem level that directly affect the ability for adolescents to obtain ECs and vaping products. However, another study that looked at where adolescents obtained their devices found that most minors were able to purchase their own vape or EC (Braak et al, 2020). Despite the efforts of macrosystems, factors within microsystems such as school environments and relationships may hold more weight or even combat the efforts and factors within macrosystems (Lippert, Corsi, and Venechuk, 2019). The true weight of microsystems is prevalent among low-risk adolescents attending schools where high rates of vaping are present, as these students are more apt to become involved with vaping simply by exposure (Lippert, Corsi, and Venechuk, 2019). The influences within microsystems create the norms of health beliefs, attitudes, and behaviors that are reflected among schoolmates (Lippert, Corsi, and Venechuk, 2019). Often, the influence of these norms outweighs policies.

When school-based policies are inconsistent, the policies along with school itself, lose power and weight. Direct association has been drawn between adolescent substance use and attendance (Lippert, Corsi, and Venechuk, 2019). This suggests that consistent policies should be rooted in developing norms of their own with a focus on success and achievement while also maintaining levels of consistency in tolerance level (Lippert, Corsi, and Venechuk, 2019). Research is divided on the notion of discipline action as a reform for EC and vape use among

adolescents. Some adolescents report the fear of getting in trouble has been a staple in decision to not vape or to quit, while others state discipline has little impact on their decision to vape. Concepts such as alternatives-to-suspension address a supportive approach over disciplinary action when students are caught for vaping on school campuses (Liu, Gaiha, and Halpern-Felsher, 2020). This approach addresses vaping from an addiction standpoint, where the goal is to provide help for the students as a cessation method versus using fear as a tactic.

Since vaping has a high exposure and use rate at schools, it is important for educators and staff to be aware of the risks it poses to students and best practice when addressing the topic. It also is pertinent to include prevention of ECs, vapes and other substances within schools' curriculum. With tobacco companies targeting adolescents as young as twelve, this information needs to be shared at a young age. Many adolescents who use ECs or vapes may be exposed outside of school as well, at jobs, family or friend gatherings or even in their own home. Adolescents have stated if they were aware of the facts and harms that vaping could cause, that would help them choose not to vape or quit. They compare this notion to the TCC education presented to them, and many adolescents refuse to smoke TCC (Less, Mady, Beckman, and Kingbury, 2022). Preparing students with the knowledge and truth of ECs and vapes can help them by making them well informed when faced with the decision to vape.

Areas of Influence

With the increase of EC and vape product usage among adolescents, researchers search for causation. Like combustible cigarettes, advertising is a common threat among exposure methods, along with peer usage. Fortunately, with regulations limiting or prohibiting advertising on television and radio, fewer adolescents are exposed to products via traditional advertising.

Despite the efforts to regulate television exposure, from 2011 to 2013 EC advertisements increased by 256% in the United States, meaning television exposure is still a threat (Wang et al, 2020). In addition to television exposure through advertisement, and character usage in movies and shows, tobacco companies have moved online with advertising, which is where many adolescents gather their information. Fewer restrictions and regulations apply to online tobacco advertising, making it easier for tobacco companies to target adolescents as young as 12 (Wang et al, 2020). Statistics report that 88% of current daily adult smokers started before the age of 18 (Shan, and Azagba, 2022). In 2018, 20.8% of high school students in the United States reported using EC, while 4.9% of middle school students reported current EC use (Shan, and Azagba, 2022). With tobacco companies continuing to target adolescents, these statistics will continue to rise.

Another contributing factor is peer or other influencer use. This includes the attitudes towards vaping and EC use of peers and influencers, such as parents or relatives. Adolescents are more likely to take up or try vaping if those around them use or have positive beliefs acknowledging ECs or vaping. In one qualitative study conducted in 2022, eleven participants spoke out about their initiation to vaping. For many or most of the participants, they were introduced to vaping by peers, either through peer pressure of feeling left out as a ‘non-vaper’ or by a sibling, or simply by exposure while hanging out with friends at homes, parks, parties or even school bathrooms (Dube et al, 2023). Another qualitative study reported a generally positive perception of vaping among the adolescent population with associations to fruity flavors, fun slang such as ‘juuling,’ ‘fiending,’ ‘hit that shit,’ and vaping tricks with names like ‘Os,’ ‘ghost inhale,’ and ‘jellyfish.’ (Less et al, 2022). Within the same sample, adolescents

reported knowing or being aware of the dangers and health concerns of vaping and EC use, yet this did not defer them from the products.

Adolescents are prone to behavior modeling. Vaping is a learned behavior demonstrated by peer modeling, making adolescents receptive to the activity or trend (Lippert, Corsi, and Venechuk, 2019). Adolescents report that their first experience with beginning vaping was due to a friend introducing them to the vape or EC (Lippert, Corsi, and Venechuk, 2019). While this may not be the only form or time of exposure, peer influence holds more weight than other influences in adolescent decision making.

When looking further into adolescents taking up vaping or EC use, it is crucial to observe the ‘why.’ Peer influence can not only be a means of introduction or supply to the products, but also a causation. Adolescents wanting to fit in socially or feel they belong, may take up vaping as a means to fit in (Dube et al, 2023). Other causations reported are release from anxiety or stress, perception, and addiction. Adolescents report how the ‘hit’ or ‘buzz’ leave them feeling less stressed (Less et al, 2022). Rates of high anxiety have increased among adolescents, especially in the last three years with the COVID-19 pandemic. Since a lot of adolescent stress derives from school, this causation is another link to adolescents using ECs and vapes during school hours and within school buildings.

Many adolescents perceive ECs and vapes to be less harmful and more socially acceptable than combustible cigarettes (Lu, Gaiha, and Halpern-Felsher, 2020). These perceptions are not unwarranted, when considered that many establishments such as outdoor seating at restaurants and bars, concerts and other popular dwellings allow or do not specifically prohibit the use of ECs and vapes. Some adolescents are under the impression that ECs and vapes only contain water or vapor and a flavoring, while others lack the understanding of the

severity of nicotine addictions especially when in comparison to other addictions, such as cigarettes (Lu, Gaiha, and Halpern-Felsher, 2020). With misinformation and lack of knowledge in conjunction with targeted advertising and continued peer exposure and use, it is crucial prevention programs are in place.

Cessation and Prevention Programs

EC and vaping prevention programs are limited largely due to the newness of the products to the market. More research is needed to determine how beneficial programs are. Many programs are built off previous combustible cigarette prevention programs. Fortunately, many current EC prevention programs have been updated in 2020 to accommodate the product changes and prevalence in adolescents, yet with the new data these programs are often not qualified as evidence-based prevention programs (Liu, Gaiha, and Halpern-Felsher, 2020).

Of the few evidence-based programs available, CATCH My Breath created out of Texas has been studied and proven effective in several research projects. In association with the University of Texas School of Public Health, the CATCH Global Foundation (CGF) designed CATCH My Breath as a middle school and high school prevention program focused on the consequences of tobacco (vaping), environmental factors and has a foundation in Social Cognitive Therapy (Kelder et al, 2020 & Baker et al, 2021). CGF produces a variety of health curriculums that can be implemented in school settings aligning with the CDC's health education standards. As one of CGF's curricula, CATCH My Breath is designed to be implemented in school settings, targeting grades fifth and up. Age relevant context is included in specific curriculums for fifth grade, sixth grade, seventh-eighth, and ninth through twelfth (Baker et al, 2021). The purpose of the program is to change student perceptions and behaviors towards

vaping, tobacco, and smoking through education (Baker et al, 2021). Kelder et al. (2020) initially conducted a survey to research the effectiveness of CATCH My Breath, and later the program was reevaluated by Baker et al (2021) discovering the program's success in not only educating students on the harms of vaping and tobacco but also the short-term data of perception and behavior towards smoking. Baker et al (2021) shared prior to engaging in CATCH My Breath, students reported about a 42% knowledge rate of EC and vaping. Post curriculum, students jumped to a 71% knowledge rate and maintained that rate of 71% at a three-month follow-up (Baker et al, 2021). Furthermore, 88.9% of Baker et al (2021)'s students indicated that they were less likely to take up vaping after participating in CATCH My Breath.

CATCH My Breath consists of four, forty-minute lessons conducted by a teacher, health care professionals or adult facilitators. Lessons include information on ingredients in ECs and vapes, the health risks associated with the products, policies including restrictions along with marketing and prevalence among peers (Baker et al, 2021). With many schools lacking a form of vaping education in their health curriculum, CATCH My Breath's generally free format, simple implementation and success rate are highly appealing to schools (Baker et al, 2021). In Minnesota, schools are required to provide health instruction education in grades Kindergarten through eighth grade, or 'by district-determined grade bands' (MDE, 2024). High school students are required to receive a form of health education at least once in their three to four years (MDE, 2024). While the Minnesota Department of Education (MDE) requires health education, how a school district meets those requirements is not defined and up to the school to determine. MDE does recommend school districts use the National Health Education Standards (NHES) to fulfill the health education requirements, however, NHES does not include guided

curriculum or mandated topics to cover. This can result in important topics like substance abuse and use, including vaping, being under taught or missed in curriculum altogether.

Similarly, the American School Counselor Association (ASCA), does not directly guide school counselors on addressing vaping or substance use with students. School counselors are advised by ASCA to divide 80% of their time counseling, advising, instructing, collaborating with other professionals, and conducting referrals as needed (Giordano, 2023). Substance use and abuse could fall into those categories, along with ethical standards created by ASCA for school counselors. Some school counselors may feel more equipped to tackle substance use than others, however all school counselors have a responsibility and duty to provide support to students. While the ASCA ethical standards do not directly provide guidelines or requirements for student substance abuse, in section A. Responsibility to Students A.1 Supporting Student Development, counselors are to provide brief context support and guide students and family members in obtaining outside services if needed (ASCA, 2022). Furthermore, in section A.9 Serious and Foreseeable Harm to Self and Other counselors are advised to advocate for students engaging in potentially dangerous risky behavior which can include substance use, addiction and/or self-harm (ASCA, 2022). Counselors should not only work closely with students in this area, but parent/guardians and administrators as well (ASCA, 2022). While collaboration is important and key to overall EC and vape prevention and cessation, school counselors serve students first and foremost. Therefore, gathering an understanding of what students feel is necessary in prevention and cessation is vital information.

Catherin E. Dube and team members' study among eleven United States adolescents in 2022 produced an interesting notion on the concept of nicotine addiction. While participants reported a concern of nicotine dependence, four of the eleven did not consider themselves

addicted (Dube et al, 2023). Similarly, participants reported concerns of negative health factors such as shortness of breath, reduced lung capacity, coughing, asthma, burning throats, even cancer and long-term health problems. Despite the concerns, the consensus was they could avoid the health risks and addiction (Dube et al, 2023). A key takeaway from conversing with adolescents on the topic of vaping is they are aware of the risks, and do not find them relevant or applicable to them. As one adolescent participant stated, “that’s the curse of the teenagers. They have the knowledge, but they don’t care” (Less, Mady, Beckman, and Kingbury, 2022). One could also argue, that is the curse of addiction; you lose control of yourself to the substance.

Programs like CATCH My Breath, serve as a foundation for students to learn about the harms of substances, addiction, and prevention. Adolescents voice a multitude of avenues to assist in EC and vaping prevention. A group of Minnesota adolescents ranging from grades nine to twelve compiled of both rural and metro dwellings provided insight into prevention. Some remained pessimistic, stating ‘if they [teenagers] wanna do it, they’re gonna find a way’ (Less, Mady, Beckman, and Kingbury, 2022). Others provided more insightful feedback suggesting more education on the harmful impacts of ECs and vapes, comparing this education to that of cigarettes, which many adolescents report as ‘disgusting’ (Less, Mady, Beckman, and Kingbury, 2022). Another study in 2021 found that adolescents who perceived ECs and vapes to be harmful were more likely to quit or have attempted quitting at some point (Jones et al, 2023).

While some adolescents report family disapproval as a reason to quit, many state that peer or friend disapproval is not a cause (Dube et al, 2023). Other reports found that social influence may pose a large barrier to quit while also being a rooted reason (Jones et al, 2023). The impact that peers and peer modeling have on adolescent vape and EC use is not only a

causation of uptake but also a deterrent in quitting. Peer impact should not be overlooked when working to prevent or assist in adolescents quitting vaping.

It is hopeful that in 2021 44.5% of reported adolescent EC users had interest in quitting and 24.9% had already attempted to quit (Jones et al, 2023). Research shows the more attempts at quitting an individual has, the higher likelihood that they will reach quitting success (Jones et al, 2023). Unfortunately, at this time many adolescents report attempting to quit ‘cold turkey’ or wish to quit without medications or counseling assistance (Jones et al, 2023). Many also reported using a friend to quit with advice or support.

Role of Counseling

A further look at EC and vape quitting/cessation programs breaks down highlights of successful programs. Creating programs centered around the individual and their needs is key. Adolescents specifically reject large group presentations as forms of prevention and quitting. This technique is not individualized nor is it person specific. Counselors and school counselors can provide individualized sessions to highlight the areas of addiction and use.

Cognitive Behavioral Therapy (CBT) has been used with combustible smoking cessation. At the center of CBT is goal setting and changing one’s behavior to achieve the goals. Since EC use is a learned behavior, in theory changing the behavior that was learned could effectively help the individual to quit vaping. One study looked at the digital clinician-assisted CBT intervention Quit Genius which is a 52-week cessation program using digitized CBT methods and coaching support in the form of a digital app (Webb et al, 2022). The results were optimistic with participants being 1.7 times more likely to remain abstinent if they effectively quit 4-weeks post

program (Webb et al, 2022). CBT is not a quick fix and does require effort from the user which can be discouraging.

Another counseling method in smoking cessation which can be adapted to EC and vaping is the ‘5A’ method. This method consists of asking about tobacco use, advising users to quit, assessing users’ readiness to quit, assisting in the quitting process, and arranging for follow-up and re-evaluation (Harvey and Chadi, 2016). This method is considered a counseling method as it works with the user and offers support throughout the process.

What many successful programs and methods of quitting TCC, EC and vaping share is the foundation of relationship and support. Though many users report attempting to quit cold-turkey, with no support or assistance, this often results in relapse or unsuccessful. When looking at many of the causations of smoking, underlying factors are affiliated, such as stress and anxiety, loneliness, and lack of self-esteem. Addressing some of these issues via counseling may help with the habit of smoking. If an adolescent finds they vape more when stressed or experiencing high anxiety, by learning other coping mechanisms, they may feel less impelled to vape.

Conclusion

With school environments playing a key role in student development, including decision making, it is prevalent that schools not only play a crucial role in EC and vape use prevention, but also in cessation. Schools unfortunately have become a pivotal area of exposure and use of adolescent vaping. Many students report not knowing enough about the harms of ECs and vaping. Some current adolescent vapers report not knowing what they are smoking. Knowledge and education are key to help students in prevention techniques and even in quitting.

Furthermore, when looking at successful cessation programs, educators can not only assist in this process but may be at the forefront of initiation. Educators play an important role in many students' lives and often are a trusting adult and role model for them. It therefore is important that educators, including teachers, paras, counselors, administration, and additional school staff know how to approach adolescent EC use and addiction.

Though some adolescents report knowing the harms of EC and vapes, they also believe they are immune to the consequences or can avoid them. Adolescents have also reported attempting to quit, and some will admit they are addicted, though others with addiction symptoms remain in denial. EC and vape use continue to rise among the adolescent population. With continued use, and new users adapting the habit regularly, health concerns among this population rise as well. Clinicians are learning new harms of EC and vape use all the time, while tobacco companies are introducing new products at a quicker rate. The concern is vital, as the vaping epidemic continues.

Presentation Overview

Educators and school staff struggle with the increased use of vapes in middle schools and high schools across the United States. As adolescent use increases, so do the effects of addiction, nicotine, and other health concerns on the education system. Staff often feel they are uninformed of how to assist or address a student vaping, let alone how to know if a student is. More information provided on not only the topic of adolescents' vaping but on vapes and e-cigarettes themselves will help staff be more knowledgeable and reputable when addressing the concern with their students. Additionally, prevention programs and techniques will be provided for staff to help them form a foundation for their own curriculum or prevention assistance.

The following presentation is a training meant for middle school and high school (grade 5th through 12th) teachers, paraprofessionals, administrators, school counselors and other staff as seen fit. The goal is to equip educators with the knowledge, tools, and skills to address adolescent vaping in a one-on-one scenario or classroom environment.

While there is no criteria or credential needed to present the training, the presenter should have a background in either a public or private middle school or high school or a health background. A school counselor, school nurse or a health teacher would be great candidates to present the material. As school counselors are advised by ASCA to divide 80% of their time counseling, advising, instructing, collaborating with other professionals, and conducting referrals as needed (Giordano, 2023) substance use and abuse could fall into those categories. This training could help school counselors meet those standards. An optional script is provided, but having additional education on the topic of addiction, vaping or adolescent behavior will help the presenter provide additional context.

Staff would benefit from the training if offered during a workshop or professional development time. Forty-five minutes to an hour should be set aside for the training. While the training discusses current prevention programs, it is not an advertisement for any particular curriculum, rather a foundational baseline to assist staff in addressing the concern of their students vaping. The training could be adapted for parents, but would not be an ideal curriculum for students. However, using information provided in the training, staff could develop their own curriculum or research curriculum aligning with suggestions and information provided in the training.

Training/Presentation Overview and Preparation

ESTIMATED PRESENTING TIME: 60 minutes

MATERIALS: PowerPoint, three sticky notes for each participant (can substitute plain paper),

Optional: pens or writing utensils, handout or certain relevant slides

Brief Overview for Presenter:

This presentation is geared towards middle school and high school staff including but not limited to teachers, paraprofessionals, administrators, and school counselors. A basic script is provided, but presenters may use a different approach or vocabulary than provided. Presenters should use the provided slides as talking points and share the data provided. While presenters do not need any specific credentials to present, it is helpful if they have some background or connection to public or private schools or health related fields. Ideal presenters could include: school counselors, public health officials, school nurses, or Junior High/High School health teachers.

Presenters may opt to print some slides as handouts for the presentation. These slides have an asterisk by the script title. Within the script provided, there will be helpful notes and suggestions for presenters on possible presentation options, including which slides are optional for handouts. Additionally, presenters can use optional slides provided to engage in brainstorming conversations with attendees which focus on support for staff, problem solving and gaining insight on areas of difficulty with current existing or nonexistent vaping prevention programs. Presentation length is timed at 60 minutes but can be adjusted based on the time allowed for the presentation.



Vaping in the Schools

A Training for School Staff

Agenda

- Introduction
- What is vaping
- Vaping Statistics: Harms and Health Concerns
- Relevance in the Schools
- Prevention/Quitting

2

Optional Script:

Here is a quick overview of what you can expect from today's presentation on vaping in schools. Today we will cover the basics of what is vaping, review vaping statistics, highlighting the harms and health concerns connected to the products. Next, we will dive into the relevance of vaping in our schools, ending with discussion on prevention and quitting.

Optional: *Before we get started, what are some questions you have?*



Terms

E-Cigarette (EC)/Vaping- battery operated or electric inhalants

TCC- Traditional Combustible Cigarettes

EVALI- E-cigarette or vaping associated lung injury

Optional Script:

Some terminology you may hear in today's presentation are EC or e-cigarettes and vapes. This is referring to battery or electric inhalants. Often these terms are used interchangeably. They do differ slightly in design but for the sake of today's presentation, we will use them generally interchangeably. TCC is traditional combustible cigarettes, and EVALI is e-cigarette or vaping associated with lung injury, which is a severe lung disease associated with vaping.



Introduction

Welcome

Importance and Relevance

Optional Script:

As part of my introduction, I will cover the importance and relevance of the topic.



Welcome

- Greeting
- Goals
- Sticky note activity

Optional Script:

(Presenter should introduce themselves- name, credentials and (optional) why this topic is passionate or relevant to them.)

ASCA Requirements

- 80% of school counselors time spent counseling, advising, instructing, collaborating and conducting referrals
- Meets the criteria put out by ASCA
- Importance of confidentiality
 - Exceptions



6

Optional Script:

(If the presenter is a school counselor, otherwise this can be skipped or added into another slide to cover the confidentiality piece) School counselors follow ASCA, American School Counselor Association guidelines. ASCA recommends 80% of school counselors' time be spent advising, instructing, collaborating, and conducting referrals. Much of this is directly working with students but can be with colleagues as well. This training falls within ASCA's guidelines. In addition, throughout the training there may be times we hold conversations with each other. To the best of our ability, I ask that we use confidentiality. If a student's name or a

situation is discussed, that student and situation need to be protected by confidentiality. Meaning, that conversation stays between us. Furthermore, confidentiality should be used with any tools or techniques learned today. If having a conversation with a student, they need to feel comfortable in sharing some potentially personal and incriminating information. The exceptions to keeping confidentiality are if someone is hurting someone else, if someone wants to hurt someone, if someone is hurting themselves or if someone gives permission to share the information. Sometimes this can feel gray especially when we discuss minors and even more so when minors are using harmful, illegal substances. We can discuss this throughout the training today to hopefully make you all feel more comfortable.

Goals

1. Better understanding of what vapes are the dangers and effects vaping/nicotine use has on adolescents
2. Gain tools to help address current adolescent users and prevent vaping and EC uptake
3. Feel confident in aiding students in cessation and prevention of EC and vapes

Optional Script:

At the end of today's presentation, participants should have a better understanding of e-cigarettes and vapes along with the dangers the products and nicotine pose towards

adolescents. Participants should leave today with some tools to address both current adolescent vape users and non-users. Both quitting and prevention tools will be discussed during today's presentation. The final goal for participants today is receiving tools and information to feel more confident in not only the topic of vaping but also cessation and prevention.

Sticky Note Activity

1. Write something you know about vaping
2. Write something you know about substance abuse or addiction
3. Write something you know about adolescence (5th grade to 12th grade)



Optional Script:

(Optional icebreaker activity)

To get started today, I would like to do a little ice breaker with you all. In front of you, you will find three sticky notes. On the first sticky note, please write something you know about vaping. (Presenter should give a couple minutes for participants to fill out the first sticky note). Once you have written down something you know about vaping, on the second sticky note, please write something you know about substance abuse or addiction. (Again, presenter should give time for participants to write and answer). On the last sticky note, please write something you know about adolescence. For the sake of this presentation let us think of adolescence as students in 5th to 12th grade. (When participants are finished, ask who is willing to share from each question).

Importance and Relevance



- Nicotine is an 'acceptable' addiction in society
- Most nicotine addictions begin before the age 18
- Schools (bathrooms) are hot spots for EC and vape use
- Use of nicotine on the developing brain has many and some major consequences effecting learning
- Advertisements increased 256% from 2011-2013
- School based programs are successful
 - 2006-2024 study found 12% reduction in smoking over 12 months

8

(Lingpeng and Azagba, 2021 & Dube et al, 2023 & Kelder et al, 2020 & Mantey, 2021)

Optional Script:

Why is this topic important and relevant? The obvious answer is the sheer number of adolescents vaping. You will see on the next slide, the most recent number in 2023 was 2.1 million adolescents still vape. Some other stats say 1 in 4 high school students vape. *(Note: add this optional statistic if presenting in the mid-west One Minnesotan study said 1 in 4 11th grade students vaped. If you work in a high school, I want you to think about your 11th graders...How many are in your school? How many is 1 in 4?)*

Let's take a look at the relevance in society and how that impacts our schools. Nicotine is considered an acceptable addiction in society proven by the increase in advertisement from 2011-2013 by over 200%. As educators, it is very relevant the impact nicotine can have on the developing brain. We have learned that the human brain is not fully developed until age 25/26 yet most nicotine addictions occur before the age of 18.

More than **2.1 million**
youth currently use e-cigarettes,

with a decline in high school students currently using e-cigarettes in 2022-2023

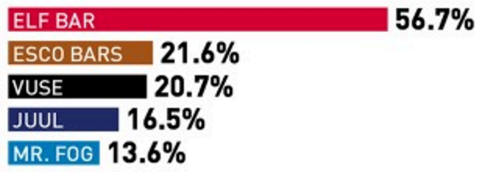
Among youth who reported current use of e-cigarettes:

More than **1 in 4**



use e-cigarettes daily

The most popular brands include disposable and cartridge-based products, and the most commonly reported products were:



Almost
9 out of 10



use flavored e-cigarettes

(FDA, 2023)

*** Optional Script:**

Here are some recent 2023 stats put out by the FDA. While there has been a small decline in adolescent EC use, the prevalence is still high. Flavors still remain a big factor in adolescent EC use.



What is vaping?

History of the Market

Anatomy of a Vape

How it Works and Nicotine

Optional Script:

What is vaping? Let's dive into what vaping is with a brief history of the product, and the anatomy and use of the device. Vaping is still relatively new to the substance use world and knowing more about it can help with prevention in adolescents.

History of Vaping



11

(Becker and Rice, 2021)

Optional Script:

A brief history of vapes and EC starts in the early 2000s, making it relatively new. Vapes were invented by a Chinese man in 2003 but entered the United States tobacco market in 2006. In 2014 JUUL entered the market and changed the marketing scene to target a younger audience primarily using social media as their platform. This is when adolescent use really took off. In 2018, vaping among adolescents was declared a public health crisis. The following year in 2019, EVALI first showed up in July and added to the severity of adolescent vape use. Also in 2019, the United States changed the legal purchase age of tobacco from 18 to 21, largely as a result of the mass number of adolescents using vapes and ECs.

Different Brands



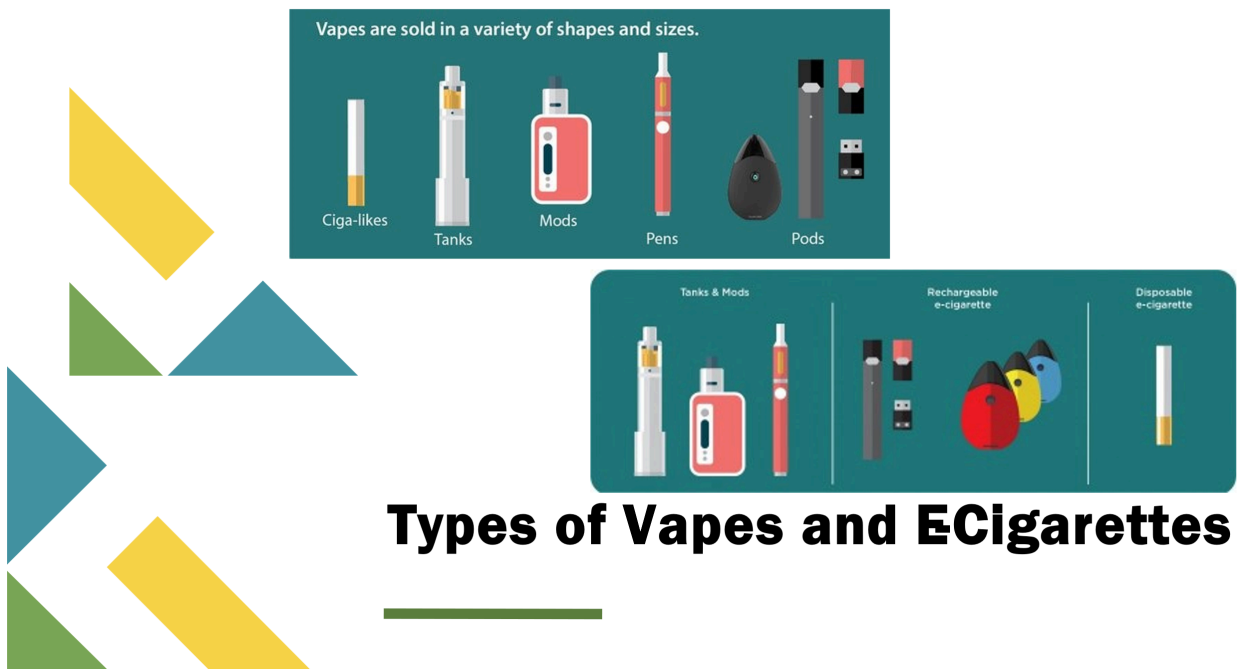
12

- JUUL- 2015 ¾ of the US EC market was JUUL
- 2018- 70% of EC market was JUUL
- While JUUL devices deliver nicotine 1.3-2.7 faster than competing brands, 'copy-cat' brands are quickly producing more potent products
- Higher doses of nicotine result in higher levels of vulnerability to nicotine addiction

(Liu, Gaiha, and Halpern-Felsher, 2020 & Kelder et al, 2020)

Optional Script:

JUUL is labeled as changing the EC and vape industry. As mentioned largely due to the media platform they used for marketing. They also are largely credited with the soar in flavors and their change in nicotine consumption. JUUL products deliver nicotine 1.3 to 2.7 times faster than previous vape models. In 2015 three fourth of the e-cigarette market was JUUL. They maintained their relevance in 2018 by taking up 70% of the EC market. Copycat brands enter the market mimicking the high levels of nicotine or design. Higher levels of nicotine is concerning as it can lead to higher levels of addiction. *(Presenter can point out the different brands and discuss the copycat effect between the brands)*



*** Optional Script:**

While JUUL is very popular there are a lot of different brands and designs for vapes. Being aware of the different designs is important to be able to identify if students are using vapes. Popular designs include the mods and pods. (*Presenter can point out the different styles of vapes*)



Optional Script:

Here is a better image of possible vape designs. As you can see these devices can be brightly colored, slim in design and truly can appear harmless.

Optional Slide

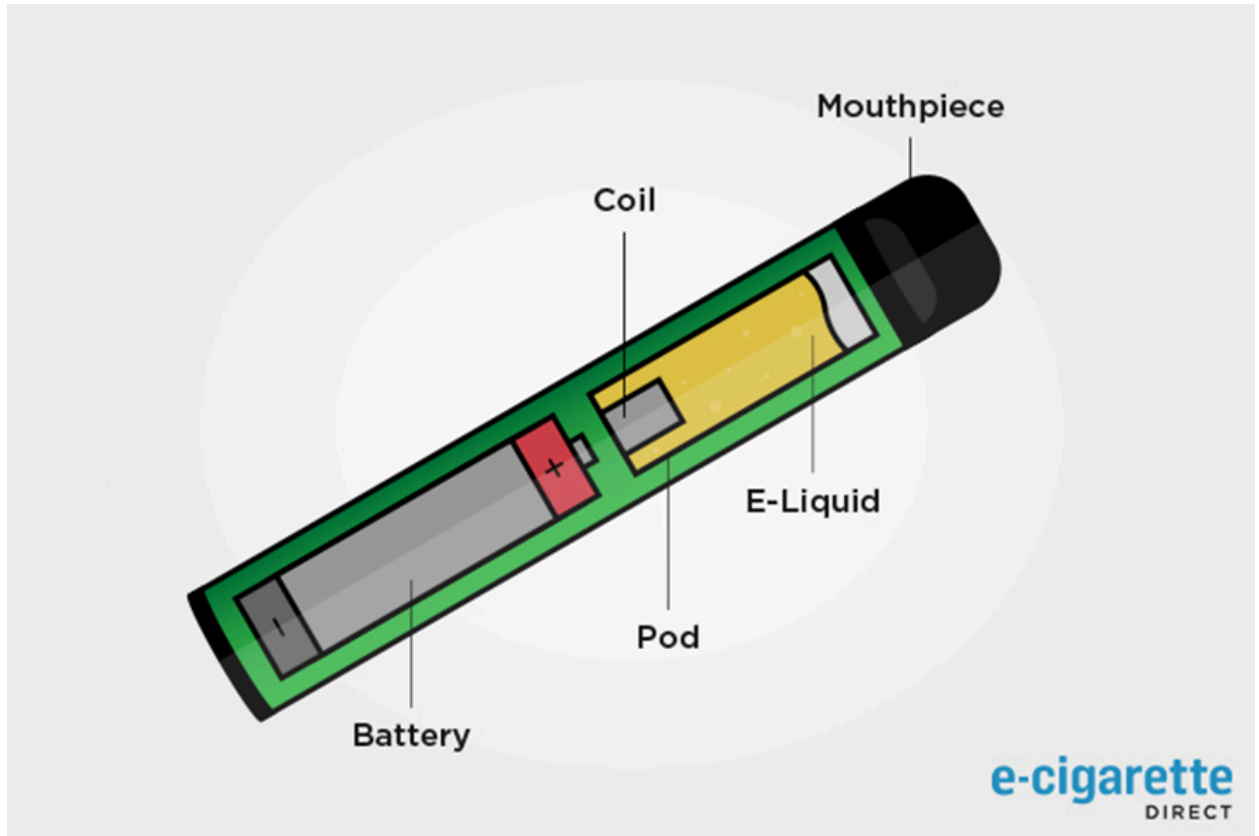


What are some common vapes that you see in your school?

Did you recognize the device as a vape when you saw it?

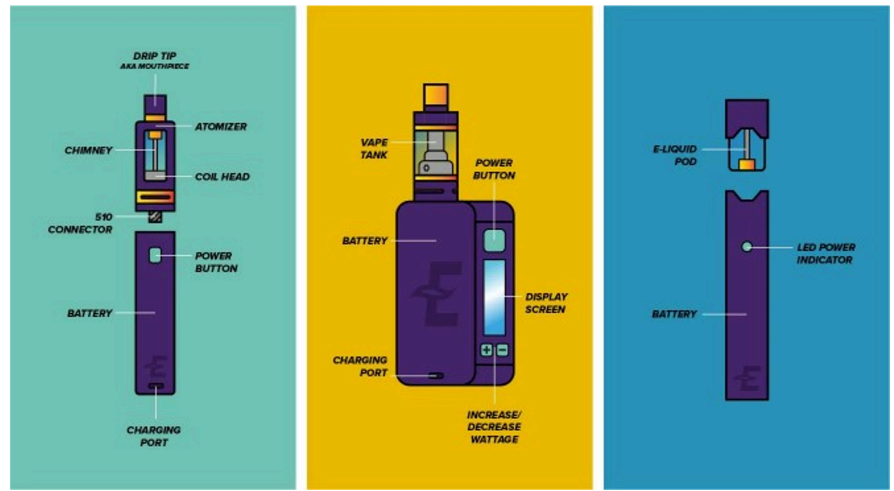
Optional Slide: If time permits, or the presenter wishes to engage attendees with conversation, use this slide.

Optional Script : With your colleagues around you (depending on the layout of the presentation room) discuss common vapes you may have seen in your school. Do you recognize any from the picture? Furthermore, did you recognize the device as a vape when you saw it? There is no shame in not recognizing these devices. As you saw from the previous slide, the slim, sleek design could easily be thought of as a thumb drive or highlighter.



Optional Script:

Vapes can be refillable/rechargeable or disposable. The refillable vapes contain a battery, a heating element, e-liquid, which can be refilled in the reusable devices and a cartridge where the e-liquid goes. E-liquid can contain nicotine, propylene glycol, vegetable glycerin, THC (vitamin E acetate), flavoring compounds and/or other chemicals. (*Presenter should point out the parts on the illustrated vape*)



The Anatomy of a Vape

* Optional Script:

Another look at the anatomy and make up of a vape. Different designs have slightly different layouts but all contain the heating device and e-liquid storage components. When working with students in both prevention and cessation or quitting, knowing the terms and common language is helpful.

1. Nicotine salts used to deliver higher levels of nicotine (60 mg of nicotine per pod/mod-JUUL) pack of 20 cigarettes—contrast TC 1.5-2% vs 5% EC/Vapes
2. Combination of salt-based nicotine and benzoic, change the PH balance of nicotine
 - a. Reduces the acidic levels
 - b. Smoother, “easier” inhalant
 - c. Easier to get hooked/addicted



18

What is in a Vape Salt-Based Nicotine

(Becker and Rice, 2021 & Less et al, 2022 & Liu, Gaiha, and Halpern-Felsher, 2020)

Optional Script:

Many if not most vapes utilize nicotine. Something different in more modern post JUUL vapes is salt-based nicotine. Salt-based nicotine is used to deliver higher levels of nicotine, up to 5% compared to TCC at 1.5-2%. Combined with benzoic, salt-based nicotine changes the PH balance of nicotine to reduce the acidic levels making the “hit” smoother and “easier” to inhale. This can result in individuals becoming hooked or addicted quicker and “easier.” This is an appealing factor to both sellers and users. Sellers want to sell more, addiction leads to more sales. Users prefer a “smoother hit.”

Nicotine



- Stimulate drug designed to increase dopamine, speed up messages traveling between brain and body
- Symptoms include: stimulation, increased heart rate, increased ability to concentrate (addiction), relaxation, reduced urge to smoke, coughing, dizziness, headaches, bad breath, tingling and numbness in fingers and toes, reduced appetite, stomach cramps, and vomiting
- Short term effects include: fatigue, decrease in energy, reduction in taste and smell, coughing and shortness of breath
- Long term effects include: stroke, blindness, cataracts, birth defects (if user is pregnant), yellowing teeth, gum disease, enlarging blood vessels, coronary heart disease, pneumonia, asthma, other respiratory complications, diabetes, reduced fertility, ectopic pregnancies, sexual dysfunction, and reduced immune function

(Ren and Lotfipour, 2019 & Sherwood, 1993 & Heishman, Kozlowski, and Henningfield, 1997)

Optional Script:

As mentioned earlier when discussing relevance, nicotine is largely considered a socially acceptable addiction. This is unfortunate as nicotine is highly addictive. It is a stimulant drug designed to increase dopamine and speed up messages traveling between brain and body. Common symptoms include: stimulation, increased heart rate, increased ability to concentrate (resulting from addiction and withdrawal), relaxation, reduced urge to smoke, coughing, dizziness, headaches, bad breath, tingling and numbness in fingers and toes, reduced appetite, stomach cramps, and vomiting. Short term effects include: fatigue, decrease in energy, reduction in taste and smell, coughing and shortness of breath. Long term effects include: stroke, blindness, cataracts, birth defects (if user is pregnant), yellowing teeth, gum disease, enlarging blood vessels, coronary heart disease, pneumonia, asthma, other respiratory complications, diabetes,

reduced fertility, ectopic pregnancies, sexual dysfunction, and reduced immune function.

Nicotine Cont



- Overdose is not common- over consumption can cause large amounts of confusion, faintness, seizures, fast breathing, respiratory arrest and death
- Highly addictive with withdrawal symptoms beginning within 2-3 hours after last use
- Withdrawal can last a few days or up to a few weeks
- Withdrawal symptoms include: craving, irritability, anxiety, depression, restless sleep, eating more (weight gain), trouble concentrating, headaches, coughing, sore throat, aches and pains, upset stomach and bowels

(Ren and Lotfipour, 2019 & Sherwood, 1993 & Heishman, Kozlowski, and Henningfield, 1997)

Optional Script:

While nicotine overdose is not common, over consumption can cause large amounts of confusion, faintness, seizures, fast breathing, respiratory arrest and death.

As mentioned, nicotine is highly addictive with withdrawal symptoms beginning within 2-3 hours after last use and withdrawal can last a few days or up to a few weeks with withdrawal symptoms include: craving, irritability, anxiety, depression, restless sleep, eating more (weight gain), trouble concentrating, headaches, coughing, sore throat, aches and pains, upset stomach and bowels.

Within a school day, an adolescent may experience withdrawal two or three times. When we look at the withdrawal symptoms, these can appear to be your typical adolescent response to day to day stressors, but at a closer look, are they experiencing withdrawal?

Nicotine Use Among Adolescents



- Brain is still developing (until 25/26)
- New connections or new skills create synapses in the brain → Nicotine changes the way synapses are built
- Young brains build synapses faster making addiction easier
- 65% of vapes sold to adolescents contain nicotine

(Dube et al, 2023)

Optional Script:

Nicotine use at any age can be challenging but especially in adolescents. The brain is still developing until the age of 25/26. When adolescents use nicotine before their brain is fully developed, it can directly affect brain growth and maturity. The brain makes new connections and learns new skills by creating synapses in the brain. Nicotine changes the way those synapses are built affecting development, and since young brains develop synapses faster than adults, this creates quicker addiction habits.

It is important to note that 65% of vapes sold to adolescents contain nicotine (note: this is just looking at direct sales to adolescents not vapes purchased by peers or family or otherwise obtained). The other 35% could contain THC, marijuana, or other substances/toxins.

Nicotine in Vapes



- Since 2015 nicotine levels in vapes increased to 2-10 times more than TCC
- 2022- 81% of vape products contain more than 5% nicotine strength (TC 1.2)
- One pod= one pack of cigarettes
- Disposable devices are cheaper and container higher levels of nicotine

(Dube et al, 2023)

Optional Script:

Since 2015 nicotine levels have increased 2-10 times more than TCCs. So much so that in 2022 81% of vaping products contained more than 5% nicotine where TCCs contain 1.2-2%. Keep in mind the effects nicotine has on the adolescent brain and the effects higher levels on growing minds can have. Furthermore, one pod (the piece of the vape that holds the e-liquid containing the nicotine) is equivalent to a pack of 20 cigarettes. For non refillable vapes, the level of nicotine may be even higher. Additionally, disposable vapes are cheaper making them potentially more appealing to users.

Optional Slide



Do any of your students have a nicotine addiction?

Do any of your students display nicotine addiction symptoms?

Optional Slide: If time permits, or the presenter wishes to engage attendees with conversation, use this slide.

Optional Script : With your colleagues around you (depending on the layout of the presentation room) discuss the potential of your students having a nicotine addiction. Some of the symptoms overlap with other common ailments or even personalities in adolescents, making it challenging to detect.



Vaping Statistics

Statistics (Adolescent)
Harms and Health Concerns
Vaping Impact on Mental Health

Optional Script:

Next we are going to look at vaping statistics focusing on vaping in adolescents. This will include the harms and health concerns related to vaping and the impacts of vaping on mental health.

Statistics



- Tobacco is the leading cause of preventable death in the US
- 14.1% of US HS students report vaping in the last 30 days- 46% reported frequent use
- 2019's Youth Risk Behavior Survey reported 50.1% of HS students had ever vaped
- 1 in 4 11th grade Minnesotan students reported vaping in the last 30 days
- 80% of EC and vape users also use cigarettes, 53% use marijuana, and 82% use alcohol (In comparison 40% of non-smoke cigarettes, 39% use marijuana and 77% use alcohol)
- 88% of adult users began smoking before age 18
- From 2017-2018 a US survey reported the sharpest substance use increase in 44 years

25

(Hoffman, 2018 & Lingpeng and Azagba, 2021 & Jones, et al, 2023 & Kelder, et al, 2020 & Berg et al 2020 & Less et al, 2022 & Lieu, Galia, and Halpern-Felsher, 2020 & Dube et al, 2023)

Optional Script:

Tobacco is the leading cause of preventable death in the US. 14.1% of US high school students report vaping in the last 30 days, of that 46% reported frequent use. 2019's Youth Risk Behavior Survey reported 50.1% of high school students had ever vaped. 1 in 4 11th grade Minnesotan students reported vaping in the last 30 days. 80% of EC and vape users also use cigarettes, 53% use marijuana, and 82% use alcohol. In comparison 40% of non-users smoke cigarettes, 39% use marijuana and 77% use alcohol. 88% of adult users began smoking before age 18. From 2017-2018 a US survey reported the sharpest substance use increase in 44 years.

Keep in mind with all the statistics and data it is important to remember that what we have is only what is reported. There are other numbers and statistics that aren't reported that could make these numbers higher.



Harms and Health Concerns

- Adolescents who vape have a greater-nicotine dependence than those who smoke TCC
 - EC/vape use causes damages in brain development impacting memory, learning, attention span and increases addiction and other mental health concerns
 - Causes cardiac and respiratory programs (EVALI-e-cigarette or vaping associated lung injury)
- Other effects
- Seizures
 - Polytabacco use
 - Gateway into other substance uses (drugs)
 - Addiction
 - Nicotine addiction is quick and hard to quit

26

(Dube et al, 2023 & Liu, Gaiha, and Halpern-Felsher, 2020 & Hadland, and Chadi, 2020 & Hoffman, 2018)

Optional Script:

As we look specifically at the harms of vaping and the health concerns resulting from vape and EC use, this does not include the health concerns we discussed earlier related to nicotine and addiction. These harms and health concerns are strictly resulting from vape and EC use. Adolescents who vape have a greater nicotine dependence than those who smoke TCCs. EC and/or vape use causes damages in brain development impacting memory, learning, attention span and increases addiction and other mental health concerns. We already discussed the impact on forming the synapses. Vape and EC use can cause cardiac and respiratory programs. Specifically, EVALI-e-cigarette or vaping associated lung injury. Other effects include but are not limited to seizures, polytabacco use (use of multiple tobacco forms), can serve as a gateway into other substance uses (drugs) along with addiction which as we mentioned earlier, nicotine addiction is a quick onset and hard to quit. The long term effects of vaping are not all known. As

more research is conducted this list may grow to include other effects to other body organs or outcomes.



Marijuana (THC)

- Increase in marijuana (THC) use in vapes
- EVALI linked to vitamin E acetate found in THC oils
- Correlation between EC/vape use and polytobacco product use and gateway into other substances

*** Optional Script:**

In addition to the dangers and harms of nicotine on the body, vapes and ECs can house marijuana or THC as well. Some devices such as JUUL's Pax are specifically used for THC. As more and more US states legalize marijuana it is becoming more popular for vapes to be used for THC. From 2017 to 2020 there was a drastic increase in both middle school and high school students using ECs to vape marijuana. In 2019, EVALI was linked to vitamin E acetate found in THC oils used in vapes. Furthermore, the use of ECs to inhale marijuana shows the correlation between EC use and polytobacco use and vaping as a gateway to other substances.

Impact on Mental Health

- Relationship between anxiety/depression and vaping
- Addiction
 - Intensify other mental health concerns

28



Optional Script:

One area of concern with EC and vape use is the impact it has on mental health. This is a complicated relationship as it is unknown which came first: Did mental health trigger vaping or did the vaping trigger anxiety and depression? Addiction not only is a stand alone mental health concern but it can cause other mental health issues. Withdrawal from addiction may cause severe anxiety or depression in users. Frequent use can also intensify existing mental health conditions.

Optional Slide



What are some resources your school has in place for mental health assistance?

Optional Slide: If time permits, or the presenter wishes to engage attendees with conversation, use this slide.

Optional Script : With your colleagues around you (depending on the layout of the presentation room) share or compile a list of some of the resources your school has available for mental health assistance with adolescent students.

Mental Health Help



- Cognitive Behavioral Therapy (CBT)
 - Redirect cravings and thoughts
- Talk therapy can help underlying anxiety/depression/mental health diagnoses
- Recommended any pharmaceutical intervention be paired with some form of therapy

(Hoffman, 2018)

Optional Script:

Fortunately, when we look at mental health and quitting vaping there is some overlap in the area of help. Cognitive Behavior Therapy (CBT) can be used both in mental health counseling but also in helping redirect cravings and thoughts around addiction. Talk therapy can also help with preexisting or underlying anxiety and/or depression along with other mental health diagnoses, like ADHD, personality disorders or previous/additional substance abuses. Later we will discuss quitting options. It is common for users to want to use pharmaceutical options or nicotine replacements. It is recommended to pair pharmaceutical interventions with some form of therapy.



Relevance in the Schools

The 'WHY' Behind Vaping

The Challenges

Student Perception

Marketing

Prevalence

Role of Schools in Vaping Uptake, Prevention and Cessation

Optional Script:

Finally, the reason we are all here, the relevance of vaping in the schools. Many educators voice concern on the topic but what do we do? Hopefully by covering the why behind vaping and its connection to schools along with addressing the challenges and prevalence we can have some helpful discussions and gain support from one another.

Why Adolescents Vape

- Peer and social
- Marketing
- Perception
- Exposure



Other reasons

- Relieve stress/anxiety
- Fancy appearance
- Flavoring
- High-tech design
- Addiction
- Socially acceptable (in public)

MOTIVES

- 63% Taste and entertainment
- 29% experimentation
- 7% Replace TCC

32

(Liu, Gaiha, and Halpern-Felsher, 2022 & Wang et al, 2020 & Becker and Rice, 2021)

Optional Script:

When looking at why adolescent vape there are four primary categories: Peer and social influence, marketing, perception and exposure. Other reasons include relieving stress and anxiety, enticing flavors, becoming addicted, fancy appearance of devices, the high-tech design and/or socially acceptable in public. Other motives ranked by a 2021 survey indicated that 63% of adolescence are motivated to vape by the taste and entertainment it provides. 29% are motivated to try by the experimental factor. Lastly only 7% of adolescents are motivated to vape by wanting to replace TCC smoking. With low numbers of adolescents smoking TCC this is not surprising.

**“calms me down in the moment if I’m
having anxiety attack or something”**

(Participant 03 Adolescent who vape nicotine and their experiences vaping: A qualitative study)



(Dube et al, 2023)

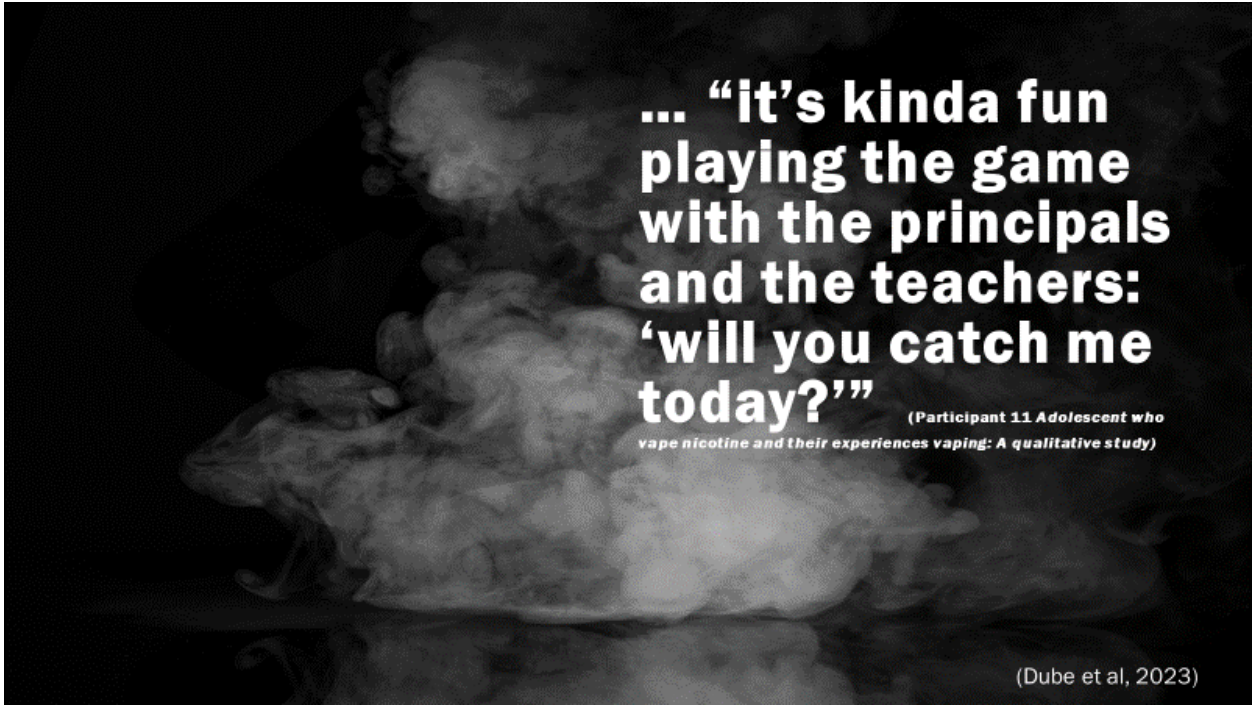
Optional Script:

One student shared it “calms me down in the moment if I’m having anxiety attack or something.”



Optional Script:

Another student shared it’s cool to see the smoke in the air”



Optional Script:

One other student commented “it’s kinda fun playing the game with the principals and the teachers: ‘will you catch me today?’” (*Optional crowd engagement: How many of you felt a connection with this quote? How did it resonate with you?*)

Social and Peer Impact

- Peers, friends and/or family introduce vaping
- Feeling left out, pressured
- Connect with peers over language or commonality, strengthen bond between peers
- Socialize
- Bias formed by peers in social setting like schools



36

(Dube et al, 2023 & Liu, Gaiha, and Halpern-Felsher, 2022)

Optional Script:

One of the top reasons adolescents choose to vape is social and peer impact. Often this comes in the form of peers, friends and/or family introducing vaping to the adolescent. Adolescents may feel left out witnessing friends and/or family vaping and may choose to take up the habit as a result. Vaping may be used as a means to connect with peers over common or shared language creating a bond and providing a socialization opportunity. Perhaps more impactful is the way that biases are formed by peers in social settings and relationships.

Marketing



- Adolescents are highly susceptible to online marketing techniques
 - Adolescents engaging in at least one form of online tobacco marketing have higher risk of tobacco initiation, frequency and progression to other tobacco products
- Advertising targets adolescents as young as 12
- Marketing on Twitter has portrayed vaping as harmless and even health-enhancing
- Marketers use words like “natural,” “organic,” “vegan” and “vitamin” in association with vape ads
- In 2016/2017 Hong Kong reported less than 28.8% of adolescent's exposure to EC marketing resulting in 0.8% vaping use

37

(Lingpeng, and Azagba, 2021)

Optional Script:

Marketing also plays a huge role in adolescents choosing to vape. Adolescents are highly susceptible to online marketing techniques. Adolescents engaging in at least one form of online tobacco marketing (such as ads on social media like TikTok or Instagram) have a higher risk of tobacco initiation, frequency, and perception to other tobacco products. Advertising for tobacco products can target adolescents as young as 12. These marketing techniques include portraying vaping as harmless and even health enhancing by using words like ‘natural,’ ‘organic,’ ‘vegan,’ and ‘vitamin.’ In 2016/2017 a Hong Kong study reported less than 28.8% of adolescents were exposed to EC marketing resulting in only 0.8% vaping among adolescents. This shows a direct correlation between marketing and EC use. In a 2020 study exposure to advertising was associated with uncertainty towards EC use harming health, being more tolerant towards EC use and a relatively respectable regard towards tobacco companies. Messages given in advertising skew adolescent perspectives in the companies favor: vaping is cool and harmless. Negative

correlations are often paired with cigarettes while more positive, modern terms are associated with vaping.

Positive Perception

- Vaping is perceived to be less risky than TCC among adolescents
- Perceived as 'healthier' option
- Even those who are aware of the risk, don't seem to care
- E-cigarettes and vapes less harmful than combustible cigarettes
- Some are aware of the dangers of vaping but take up the habit anyways
- Stress relief
- Way to socialize or fit in with social groups

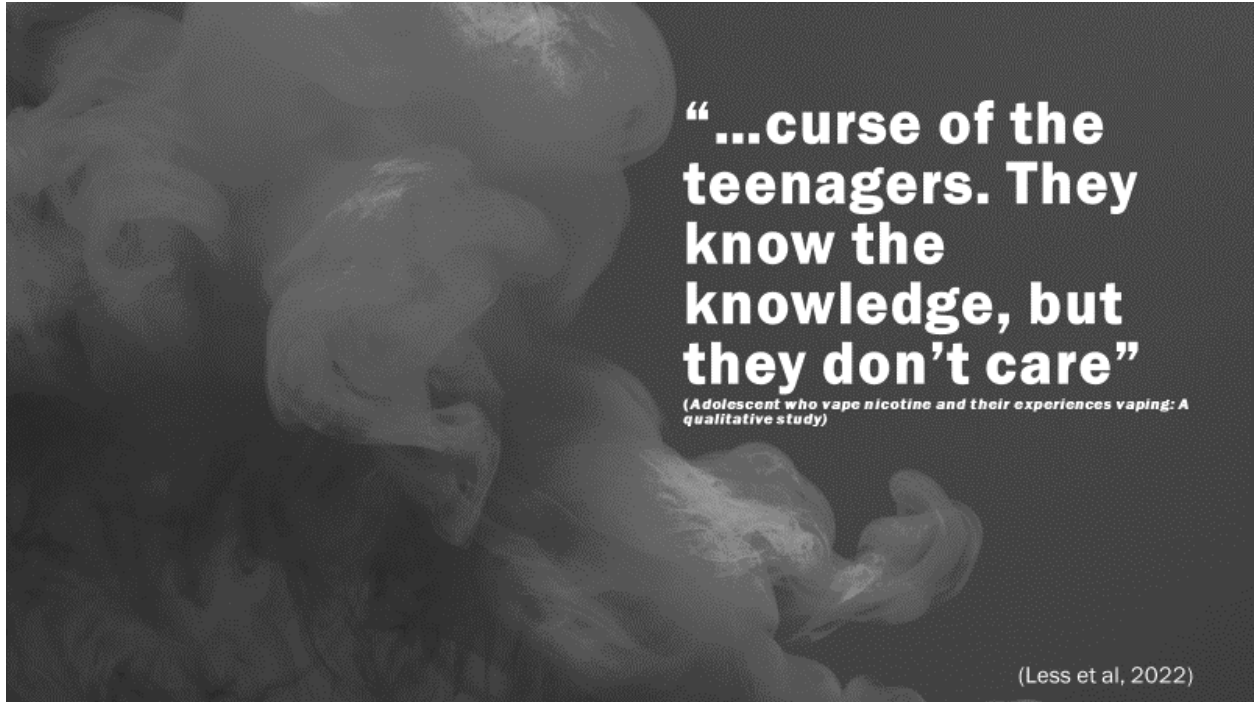
38



(Lu, Gaiha, and Halpern-Felsher, 2020)

Optional Script:

In addition to the positive word association with vaping, adolescents tend to perceive vaping as less risky than TCC smoking. It is also perceived as a healthier option and less harmful. Even those who are aware of risks and harms share that they don't care or opt to take up the habit anyways. Positive perceptions of stress relief and socializing are also associated with vaping enticing adolescents to vape. These perceptions are formed by media and advertising, peers, and social environment impact.



Optional Script:

Despite some adolescents' awareness of the dangers of tobacco and vaping, many choose to still do it. One adolescent even admitted it's the “curse of the teenagers. They know the knowledge, but they don’t care.”

Exposure



- Student attending schools with higher levels of vape use are more likely to take up vaping
- Connecticut school study reported
 - 2 out of 3 middle school students reported seeing EC use on school campus
 - 45% of students used EC or vaped on school campus
 - 64.3% reported use and exposure on campus
- Common school exposures include
 - Bathrooms
 - Locker rooms
 - Parking lots
 - Sidewalks
- Exposure to EC advertising is associated with tolerant attitudes and beliefs towards tobacco products and use

40

(Mantey et al, 2020 & Dube et al, 2023 & Lingpeng and Azagba, 2021)

Optional Script:

Exposure to vaping is a large contributor to adolescents vaping. Students attending schools with higher levels of vape use are more likely to take up vaping. A study conducted at a Connecticut school reported 2 out of 3 middle school students reported seeing EC use on school campus. 45% of students used EC or vaped on the school campus while 64.3% reported use and exposure on campus. Common areas of these exposures were bathrooms, locker rooms, parking lots, and sidewalks. In addition to physical exposure, exposure to advertising is associated with tolerant attitudes and beliefs towards tobacco products and use.

Purchases



41

- December 2019 US raised the legal tobacco purchasing age to 21
 - Sales to minors still common
- 7.5% of adolescent users report purchasing vape products
- 10-20% report giving money to someone else to purchase vaping products
- Often obtained from peers/family or directly from online sources

(Braak et al, 2020 & Lippert, Corsi, and Venechuk, 2019)

Optional Script:

Once adolescents start vaping, acquiring vapes varies from purchasing vapes themselves which is around 7.5% of adolescent users to 10-20% reporting giving money to someone else to purchase the product for them. Despite the legal tobacco purchasing age changing from 18 to 21 in 2019 as a result of the high numbers of adolescents vaping, sales to minors is still common. Online is a common site for adolescents to make vape purchases, while local dispensaries and shops like gas stations are also common.

In the United States 58.5% of purchases from individuals under the legal age occurred from vape shops, with 24.8% of purchases occurring online. Additionally, 36.8% purchased vapes from retail stores.

Optional Slide



With the given information, what can your school implement to help prevent vaping uptake?

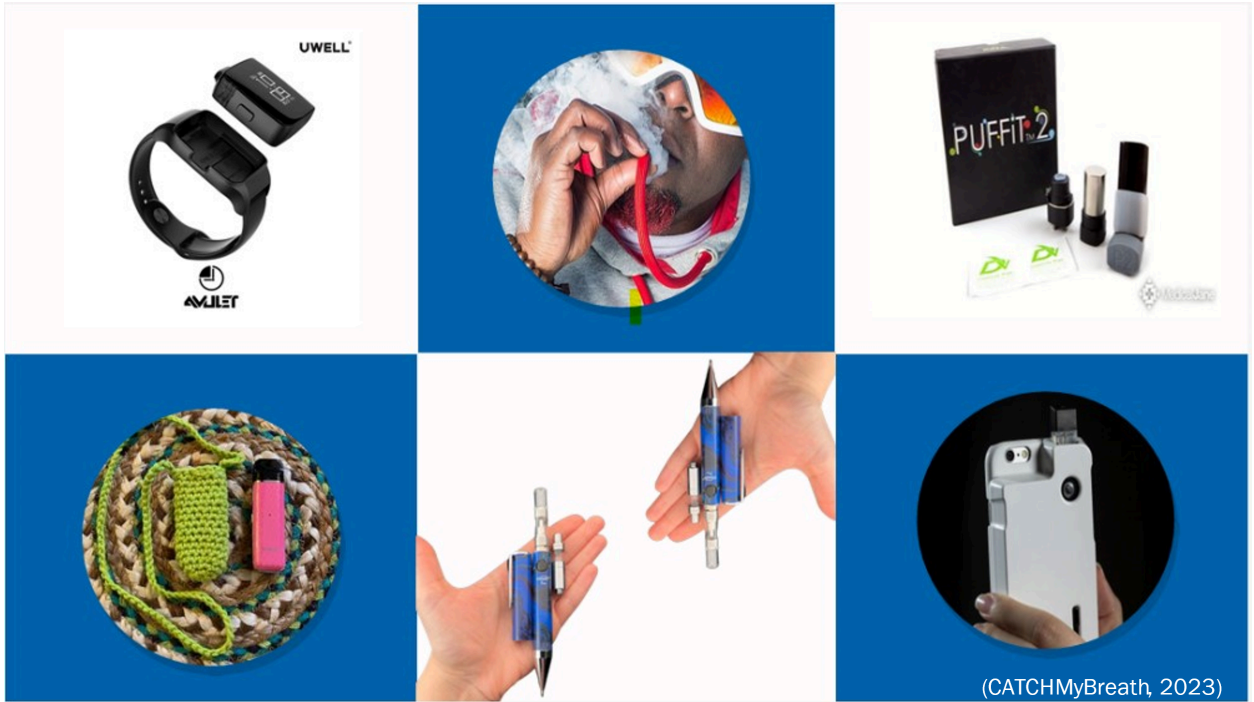
Optional Slide: If time permits, or the presenter wishes to engage attendees with conversation, use this slide.

Optional Script : With your colleagues around you (depending on the layout of the presentation room) at this point in the presentation, what do you feel your school can do to prevent vaping uptake? Are there certain uptake criteria that your students experience more than others? For example, do your students use social media and therefore may be targeted a lot for social media vaping advertising?



Optional Script:

A common comment among educators is how hard it is to catch students using vapes and ECs in the school.



*** Optional Script:**

And for obvious reasons. This slide is from a 2023 presentation from a CATCH representative. Each product shown is either a vaping device or a way to hide a vape. (Presenter can elaborate on each item if they wish)



Optional Script:

From the same presentation, here are two examples of vapes hidden in everyday objects at school. On the left we have a vape hidden in a water bottle. The right image shows a Sharpie converted into a vape holder.

Optional Slide



What are some ways you have seen students/minors hide vaping?

Optional Slide: If time permits, or the presenter wishes to engage attendees with conversation, use this slide.

Optional Script : With your colleagues around you (depending on the layout of the presentation room) share some ways you've seen students hide vaping. If you haven't discuss, your thoughts on students using some of the shared methods to hide vaping in schools.



Prevention/ Quitting

Prevention/Quitting

Role of Staff and Counselors

Current Programs/Approaches

CATCH My Breath

Theories

5 As

Optional Script:

The last area we will cover today is prevention and quitting. We will review current programs and some techniques to utilize in vaping prevention and cessation.

“We have a little bit in our health curriculum but it’s not enough...”



(Dai et al, 2021)

Optional Script:

Finding a curriculum for vaping prevention, cessation and substance use in general can be a challenge. This quote is directly from a teacher provided in a survey/study.

Optional Slide



What does your school currently have in place for vaping prevention? Cessation?

Optional Slide: If time permits, or the presenter wishes to engage attendees with conversation, use this slide.

Optional Script : With your colleagues around you (depending on the layout of the presentation room) discuss or compile a list of what your school currently does for vaping prevention. Does your school have anything in place for helping students quit vaping?

Adolescent Thoughts on Quitting

- Adolescents believe they can stop at any time but are making the choice not to
- Too late, they are too addicted
- The bad stuff won't happen to them



50

(Hadland and Chadi, 2020 & Less et al, 2022)

Optional Script:

It is important to understand adolescents' thoughts on quitting vaping. The most successful quitting program works with the addict and is based on a good relationship and trust. Adolescents believe they can stop at any time but are making the decision not to. This thought provides them with a sense of control despite the possibility they lost it to addiction. Some believe it is too late to quit, as they are too addicted. Also, the concept that the 'bad stuff' won't happen to them, mimicking the idea that adolescents feel indestructible.

(The presenter may ask how this information helps staff better help adolescents quit. One idea would be to break into small groups for a discussion. Another would be to utilize the sticky note activity again to have them write down their thoughts.)

Challenges in Prevention/Quitting Programs



- Long term effects of EC use unknown
 - Flavors
 - Marketing
 - Perception that EC and vape use is not harmful
 - Confidentiality concerns among adolescents
 - Low motivation or desire to quit
 - The negative impacts and consequences are perceived to not apply to adolescent users
- ❖ Too late (too addicted)

(Kelder et al, 2020 & Bold et al, 2021 & Jones et al, 2023)

Optional Script:

There are many challenges in prevention and quitting programs, especially with vaping as programs are still relatively new. Some common challenges are the long term effects of EC use are unknown, meaning justification to quit can be hard. The flavors pose a new threat compared to TCC. Marketing is still a battle as social media and online are less regulated than TV or other ad forms. The perception not only among adolescents but society supports vape as a healthier less harmful habit. Adolescents fear breaks in confidentiality from those providing the prevention or quitting service. There is a low motive or desire to quit among users. As with many negative behaviors, the negative impacts and consequences are perceived to not apply to the adolescent users- the 'I am indestructible' belief. And lastly, some believe it is too late, that they are too addicted.

Top Three Quitting Methods

1. 71.6% Unassisted quitting
2. 67% Advice from a friend
3. 44% Nicotine replacement products

School based programs ranked at 13.5%

Unassisted may be so popular due to lack of knowledge, interest, trust, or lack of programs available



52

(Jones et al, 2023)

Optional Script:

When asked about some popular forms of quitting, adolescents in one study answered 71.6% would attempt to quit unassisted. This could be a popular answer due to lack of knowledge, interest, trust or programs available. 67% stated they would take advice from a friend on how to quit. 44% claimed they would use nicotine replacement products. Despite school based programs showing success, it was ranked at 13.5%.

1. Cost (\$100 a month)
2. Health
3. Mood swings
(worsen depression,
anxiety, withdrawal,
addiction)
4. Family or peer
disapproval



Other Adolescent Quitting Statistics and Factors

- Perception of harm is directly linked to adolescence determination to quit
- 44.5% of adolescents reported a desire to quit
- 24.9% reported a quitting attempt with the previous year
- Greater attempts at quitting the higher the likelihood of success

Adolescent's Reasons to Quit

(Jones et al, 2023 & Dube et al, 2023 & Hadland and Chadi, 2020)



Optional Script:

Despite adolescents showing unpromising manners to quit, they did seem to want to with 44.5% reporting a desire to quit and 24.9% reporting an attempted quit in the previous year. This is promising as the greater attempts at quitting the higher positive outcome of successful quitting. Reasons for quitting were cost, with some spending \$100 a month on the habit. Others were health concerns, mood swings (worsened depression, anxiety, withdrawal and addiction) and the disapproval from family and peers. The higher the perception of harm, the more likeness that an adolescent will want to quit. There is a direct link between perceived harm and quitting.

1. Large presentations (assemblies) are not successful
2. Trusted adult: physician, public health providers, school counselors, teachers, coaches and/or parents (Principals impact less accepted)
3. Personal stories and connections speak more than warnings and knowledge
4. During school hours
5. May be hesitant to teacher or parent involvement due to fear of getting in trouble
6. Tools to address stress/anxiety, problem-solving, social supports and refusal skills



Adolescents Suggestions

(Less et al, 2022 & Bold et al, 2021)

Optional Script:

Working with adolescents to form prevention and quitting programs is important. With peer approval and support ranking high among adolescents, buy in to quit or refuse vaping is key to prevention. When asked about prevention, adolescents responded that large presentations or assemblies were not successful means of prevention. Most wanted a trusted adult involved but stated that principals were less accepted. Personal stories and connections were more powerful in prevention and quitting than warning and knowledge. Although, some adolescents did want more information comparing the information they have on TCC and their disgust towards smoking TCCs. During school hours was best but they may be hesitant to work with a teacher or parent due to fear of getting in trouble. They believed learning tools to manage or address stress and anxiety, problem solving, social support and refusal skills were all beneficial in a prevention program.



- May need other strategies than traditional programs due to flavors, misperceptions, peer and social norms differ
- Interactive curricula with context addressing health effects and dangers
- Alternative-to-Suspension programs
- Schools are ideal setting as they meet large numbers of adolescents and connect with the social lives of peers
- Address the dangers of nicotine addiction, and marketing techniques early
- Use adolescent friendly vocabulary
- Know popular brand names
- Ask how adolescents are using the device (what is being inhaled)

Other Suggestions for Prevention Programs

(Liu, Gaiha, and Halpern-Felsher, 2020 & Kelder et al. 2020 & Hadland and Chadi, 2020)

Optional Script:

In addition to what adolescents proposed for prevention programs, other successful suggestions include using other strategies beyond current substance or TCC prevention programs due to the flavors in vapes, the misperceptions, and the peer and social norms that differ from dated programs. Curricula should be interactive with context addressing health effects and dangers. Look at programs that provide support instead of discipline, like alternative-to-suspension. Schools remain ideal locations for programs as they meet large numbers of adolescents and connect the social lives of their peers to the potential problems. Addressing nicotine addition and marketing techniques early in prevention and at a young age is important. Connect with adolescents by using appropriate and relevant terms. This includes knowing brand names but also slangs and what is relevant. For example, how vapes work. Also, show curiosity by being interested in the adolescents' usage. Ask questions on how they are using their vape (how often, what they inhale, how they acquire, etc.) It is important to build

trust with adolescents. A lot of users fear getting in trouble, and asking questions may seem like you are trying to get them caught. Build the relationship first, and reassure them you are asking to learn more so you can help them. Knowing what adolescents are inhaling is very important as nicotine is going to be different from THC.

School Based Curriculum



- In US students spend on average 6.6 hours in school
- Drug curriculum mandatory in many countries
- School environments with lax norms risk developing beliefs and attitudes associated with substance use
- Schools catering to norms emphasizing success and achievement discourage substance use behaviors
- EC use is defined as a learned behavior modeled by peers

(Dai et al, 2021 & Lippert, Corsi, and Venechuk, 2019 & Gardner et al, 2023)

Optional Script:

As suggested, school is an ideal location for a prevention curriculum. Students in the US spend on average 6.6 hours in school. In many countries drug curriculum is required. With this in mind, school environments with lax norms risk developing beliefs and attitudes associated with substance use. In comparison, schools catering to norms emphasizing success and achievements discourage substance use behaviors. Since EC use is defined as a learned behavior modeled by peers, the atmosphere in a school can affect beliefs and behaviors around vaping.

CATCH My Breath School Based Curriculum



- 2015 → Continually updated since 2016
- University of Texas School Public Health in collaboration with CATCH
- Based on prevention of adolescent cigarette smoking
- Multicomponent framework: Social competence and social influences
- Foundation in Social Cognitive Theory
- School based with easy to implement classroom lessons
- Began in middle school, expanded in 2019 to include HS (grades 5-12)
- Prevention program

(Kelder et al. 2020)

Optional Script:

CATCH My Breath is an evidence based program created out of Texas in collaboration with University of Texas School Public Health and CATCH in 2015. CATCH is a whole child wellness program that creates curriculum for school based health and wellness programs.

CATCH My Breath was created based on the prevention of adolescent cigarette smoking using a multicomponent framework of social competence and social influences with a Social Cognitive Theory foundation. It is designed to be implemented in classrooms with lessons. Originally it was created for middle school, but in 2019 added high school lessons to the curriculum. This prevention program has been regularly updated since 2016.

Schools implementing CATCH My Breath have seen significant increases in EC knowledge and positive outcomes for not using EC or vapes. In one study, both ever-users and

users within the last 30 days showed less prevalence gains when receiving the CATCH My Breath curriculum than the control group not receiving the prevention curriculum.

Social Cognitive Theory Approach



- Focus on behavior
- Environmental factors: peers, health messaging, social reinforcement
- Intrapersonal factors: Outcome expectations
- Social competence
- Refusal skills

(Kelder et al, 2020)

Optional Script:

CATCH My Breath's foundation in Social Cognitive Theory (SBT) allows for a therapeutic approach in some ways. The focus is largely on behavior, and the impact environmental factors such as peers, health messaging/marketing and social reinforcement can have on adolescent behaviors. The curriculum looks at intrapersonal factors and what those outcome expectations are. CATCH My Breath acknowledges that vaping and EC use is largely connected to social norms and provides knowledge and skills (such as refusal skills) to adolescents to set them up for success.

Theories

Theory of Planned Behavior, Social Cognitive Theory and Transtheoretical Model of Behavior Change



Theory of Planned Behavior

- 1991
- Intentions, attitudes, subjective norms, and perceived behavior impact actions
- Understand intentions

(Liu, Gaiha, and Halper-Felsher, 2020)

Optional Script:

Additional theories used in prevention and cessation are Theory of Planned Behavior, Social Cognitive Theory (Social Learning Theory which we just touched on a bit) and Transtheoretical Model of Behavior Change. Theories provide a foundation to form not only curriculums off of, but also guidance for intervention and approach to discussion quitting or vape use.

Theory of Planned Behavior was introduced in 1991. It primarily focuses on intentions behind addiction looking at the individuals attitudes, subjective norms and perceived impact derived from the substance. The foundation is in understanding the intentions behind the addiction and addressing the substance use or abuse from that perspective. This theory is rooted in relationships and finding out the why to help the individual. Theoretically, once the why is

found, cessation can begin.

Theories Cont



Social Cognitive Theory (Social Learning Theory)

- 1980s
- Understand behavior change
- Individuals learn from modeled behaviors (common among adolescents)
- Social norms and peer pressure

(Liu, Gaiha, and Halper-Felsher, 2020)

Optional Script:

Social Cognitive Theory is the foundation of CATCH My Breath as discussed previously. It was introduced in 1980 as a theory that focused on understanding behavior change. Because this theory focuses on individuals learning from modeled behavior, it is ideal for working with adolescents who tend to learn from peers or others modeled behavior. This is often why peer pressure or social norms are so impactful among adolescents

Theories Cont



Transtheoretical Model (Stages of Change Model)

- 1980s
- Progression of Stages
 - Precontemplation
 - Contemplation
 - Preparation
 - Action
 - Maintenance
- Used to guide and meet individuals in their stage of quitting
- Common terminology (Liu, Gaiha, and Halper-Felsher, 2020)

Optional Script:

Another theory developed in the 1980s is the Transtheoretical Model or known as the stages of change model. This model observes a multi level change process which can be used to guide and meet individuals along their stages of change (or quitting an addiction). The stages are precontemplation, contemplation, preparation, action and maintenance. The stages provide common terminology for both user and counselor (or other professional) to use in communication and throughout the process of quitting.

5 A's



ASK whether they vape

ADVISE to quit

ASSESS motivations and readiness

ASSIST in cessation effort

ARRANGE ongoing follow-up

(Hadland, and Chadi, 2020)

* Optional Script:

A common technique among counselors when working with clients to quit an addiction is the 5 As. While the technique is used in a clinical setting usually, the concept can be modified or briefly used in a school setting or as a baseline conversation starter or approach to working with adolescents who vape. The 5 As stand for ASK, ADVISE, ASSESS, ASSIST and ARRANGE. Ask whether they vape. This is a good starting point. From there, advise the adolescent to quit. This is very broad and should be approached with caution. Keep in mind the relationship between adult and student. Adolescents tend to do the opposite of what an adult advises if the relationship is not sincere. Next assess the adolescents motivation or readiness level to quit. This may be a good time to apply the Transtheoretical models stages of progress. Then assist adolescents in their quitting efforts. Perhaps this is hands off, you provide pamphlets and resources but the rest is beyond your abilities. Or in comparison maybe you are very hands on in this role, meeting with them weekly to assess their progress, providing additional support. This

may look different depending on your role. Finally, arrange ongoing follow up. By now, you should have created a good relationship with the student. Continue this relationship as a mentor and provide ongoing support. Unfortunately, quitting addiction is a long road, with potential for relapse. Some individuals may struggle more than others and the quitting battle may be a lifelong one.

Screening Tools for Substance Abuse In Minors		
Screening Tool	Length	Description
Screening to Brief Intervention (S2BI)	3-7 Items	Asks about tobacco, alcohol, marijuana and other drug use
CRAFFT	3-9 Items	Asks about alcohol, marijuana and other drug use along with any problems associated with use
Alcohol Use Disorders Identification Test (AUDIT)	10 Items	Gathers information on concerns, frequency, intensity and consequences of alcohol use
Brief Screener for Tobacco, Alcohol, and Other Drugs (BSTAD)	6-36 Items	Identifies tobacco, alcohol, marijuana, and other substance use of user and friends including frequency
Global Appraisal of Individual Needs (GAIN)	Length Varies Depending on Version	Covers substance use and mental health by using a comprehensive format
National Institute on Alcohol Abuse and Alcoholism Youth Alcohol Screen	2 Items	Gathers data on user and friends' alcohol use

***Optional Script:**

In addition to prevention programs and techniques, assessments targeting adolescents EC use and vaping tendencies can also be beneficial. Some of these can only be performed by a clinician while others are more open for staff to use. Being aware that there are assessments available is important especially if a student is at a point of needing outside services for their addiction or returning from an outservice rehabilitation.

The Screening to Brief Intervention (S2BI) is an online screening tool submitted by the user or a clinician. This assessment covers multiple substances and is not targeted at only tobacco. This is not an assessment that school staff would give but is good to know if a student is returning from treatment or seeking help outside of school. Another general substance use screener is the Brief Screener for Tobacco, Alcohol and Other Drugs (BSTAD). Again not an assessment provided at school but good to be aware of.

The CRAFFT is an assessment given by health professionals screening substance abuse. This is a fairly common assessment when adolescents begin professional therapy or substance treatment. Another assessment to be aware of especially if adolescents are returning to school from outside help.

Hooked on Nicotine Checklist

- Created by Joseph DiFranza, M.D.
- Used to determine onset and strength of tobacco dependence
- Adolescents (12-15)
- Starting point for cessation

64

HONC

The Hooked on Nicotine Checklist.

	YES	NO
1) Have you ever tried to quit, but couldn't?	_____	_____
2) Do you smoke <u>now</u> because it is really hard to quit?	_____	_____
3) Have you ever felt like you were addicted to tobacco?	_____	_____
4) Do you ever have strong cravings to smoke?	_____	_____
5) Have you ever felt like you really needed a cigarette?	_____	_____
6) Is it hard to keep from smoking in places where you are not supposed to, like school?	_____	_____
When you tried to stop smoking... (or, when you haven't used tobacco for a while...)		
7) did you find it hard to concentrate because you couldn't smoke?	_____	_____
8) did you feel more irritable because you couldn't smoke?	_____	_____
9) did you feel a strong need or urge to smoke?	_____	_____
10) did you feel nervous, restless or anxious because you couldn't smoke?	_____	_____

(Hadland, and Chadi, 2020 & DiFranza et al, 2002)

* Optional Script:

The Hooked on Nicotine Checklist is available for anyone to use. It is simple with ten questions and used to determine onset and strength of tobacco use. It is a good starting point for cessation as it can inform the user and support system how severe the usage is. This assessment is ideal for adolescents 12-15. (Presenter can include this as a handout.)



Thank you

Questions?

That concludes today's training and presentation on vaping in schools. Thank you for your attendance. (Optional: *What questions do you have?*)

Pre/Post Assessment and Training Evaluation

Vaping in the Schools: A training for school staff

Training Evaluation

Trainer: _____ **Training Location:** _____ **Date of training:** _____

Rate your knowledge about:	Prior to Training			Post Training		
	Low	Moderate	High	Low	Moderate	High
Vapes (anatomy, use, design)						
Prevalence (statistics) of vapes among adolescents						
Dangers/harm of nicotine use in adolescents						
Dangers/harm for adolescents vaping						
Tools to address current adolescent vape users						
Tools to prevent adolescents from starting to vape						
Tools in assisting adolescents in quitting						
Confidence in aiding students in quitting and preventing EC and vape use						
What my school is/can do to help the vaping epidemic among adolescents						

Please rate (by circling) your overall satisfaction with the training:

1- Very Unsatisfied 2-Unsatisfied 3-Adequately Satisfied 4-Satisfied 5- Very Satisfied

If you rated the training 3 or less, please provide additional comments that can be applied to the training for a better experience. _____

References

- American School Counselor Association. (2022). *ASCA Ethical Standards for School Counselors*. <https://www.schoolcounselor.org/getmedia/44f30280-ffe8-4b41-9ad8-f15909c3d164/EthicalStandards.pdf>
- Baker, K. A., Campbell, N. J., Noonan, D., Thompson, J. A., & Derouin, A. (2022). Vaping Prevention in a Middle School Population Using CATCH My Breath. *Journal of Pediatric Health Care*, 36(2), 90–98. <https://doi.org/10.1016/j.pedhc.2021.07.013>
- Becker, T. D., & Rice, T. R. (2022). Youth vaping: a review and update on global epidemiology, physical and behavioral health risks, and clinical considerations. *European Journal of Pediatrics*, 181(2), 453–462. <https://doi.org/10.1007/s00431-021-04220-x>
- Berg, C. J., Krishnan, N., Graham, A. L., & Abrams, L. C. (2021). A synthesis of the literature to inform vaping cessation interventions for young adults. *Addictive Behaviors*, 119, 106898–106898. <https://doi.org/10.1016/j.addbeh.2021.106898>
- Bold, K., Kong, G., Cavallo, D., Davis, D., Jackson, A., & Krishnan-Sarin, S. (2022). School-based E-cigarette cessation programs: What do youth want? *Addictive Behaviors*, 125, 107167–107167. <https://doi.org/10.1016/j.addbeh.2021.107167>
- Bostock-Cox, B. (2015). Smoking cessation-making every contact count. *Practice Nurse : the Journal for Nurses in General Practice*, 45(3), 19–22.

Braak, D., Michael Cummings, K., Nahhas, G. J., Reid, J. L., & Hammond, D. (2020). How are adolescents getting their vaping products? Findings from the international tobacco control (ITC) youth tobacco and vaping survey. *Addictive Behaviors, 105*, 106345–106345.
<https://doi.org/10.1016/j.addbeh.2020.106345>

CATCH Coordinated Approach to Child Health (2024). *CATCH My Breath*.
<https://catch.org/program/vaping-prevention/#>

Center for Disease Control and Prevention, CDC (2019). *Characteristics of an Effective Health Education Curriculum*.
<https://www.cdc.gov/healthyschools/sher/characteristics/index.htm>

Dai, H., Ramos, A., Tamrakar, N., Cheney, M., Samson, K., & Grimm, B. (2021). School Personnel’s Responses to School-based Vaping Prevention Program: A Qualitative Study. *Health Behavior and Policy Review, 8*(2), 130–147.
<https://doi.org/10.14485/HBPR.8.2.4>

Dubé, C. E., Pbert, L., Nagawa, C. S., Simone, D. P., Wijesundara, J. G., & Sadasivam, R. S. (2023). Adolescents Who Vape Nicotine and Their Experiences Vaping: A Qualitative Study. *Substance Abuse : Research and Treatment, 17*, 11782218231183934–11782218231183934. <https://doi.org/10.1177/11782218231183934>

Gardner, L. A., Rowe, A.-L., Stockings, E., Champion, K. E., Hides, L., McBride, N., Allsop, S., O'Dean, S., Sunderland, M., Lee, Y. Y., Mihalopoulos, C., Freeman, B., Leung, J., McRobbie, H., Stapinski, L., Lee, N., Thornton, L., Debenham, J., Teesson, M., & Newton, N. C. (2023). Study protocol of the Our Futures Vaping Trial: a cluster randomized controlled trial of a school-based eHealth intervention to prevent e-cigarette use among adolescents. *BMC Public Health*, *23*(1), 683–683.

<https://doi.org/10.1186/s12889-023-15609-8>

Hadland, S. E., & Chadi, N. (2020). Through the Haze: What Clinicians Can Do to Address x Youth Vaping. *Journal of Adolescent Health*, *66*(1), 10–14.

<https://doi.org/10.1016/j.jadohealth.2019.10.009>

Harvey, J., & Chadi, N. (2016). Strategies to promote smoking cessation among adolescents. *Paediatrics & Child Health*, *21*(4), 1–.

Hoffman, J. (2018). How to Help Teenagers Quit Vaping. *New York Times (Online)*.

Jones, E., Endrighi, R., Weinstein, D., Jankowski, A., Quintiliani, L. M., & Borrelli, B. (2023). Methods used to quit vaping among adolescents and associations with perceived risk, addiction, and socio-economic status. *Addictive Behaviors*, *147*, 107835–107835.

<https://doi.org/10.1016/j.addbeh.2023.107835>

Kelder, S. H., Mantey, D. S., Van Dusen, D., Case, K., Haas, A., & Springer, A. E. (2020). A

Middle School Program to Prevent E-Cigarette Use: A Pilot Study of “CATCH My Breath.” *Public Health Reports* (1974), 135(2), 220–229.

<https://doi.org/10.1177/0033354919900887>

Kelder, S. H., Mantey, D. S., Van Dusen, D., Vaughn, T., Bianco, M., & Springer, A. E. (2021). Dissemination of CATCH My Breath, a middle school E-Cigarette prevention program. *Addictive Behaviors*, 113, 106698–106698.

<https://doi.org/10.1016/j.addbeh.2020.106698>

Less, E. L., Mady, M., Beckman, K. J., & Kingsbury, J. H. (2022). “If Someone Has It, I’m Gonna Hit It”: Lessons Learned From Minnesota Teens About Vaping. *Health Promotion Practice*, 23(6), 1028–1038. <https://doi.org/10.1177/15248399211045353>

Lippert, A. M., Corsi, D. J., & Venechuk, G. E. (2019). Schools Influence Adolescent E-Cigarette use, but when? Examining the Interdependent Association between School Context and Teen Vaping over time. *Journal of Youth & Adolescence*, 48(10), 1899–1911. <https://doi-org.trmproxy.mnpals.net/10.1007/s10964-019-01106-y>

Liu, J., Gaiha, A.M., & Halpern-Felsher, B. (2020). A Breath of Knowledge: Overview of Current Adolescent E-Cigarette Prevention and Cessation Program. *Current Addiction Reports*, 7(2020) 520-532. <https://doi.org/10.1007/s40429-020-00345-5>

Liu, J., Gaiha, S. M., & Halpern-Felsher, B. (2022). School-based programs to prevent

- adolescent e-cigarette use: A report card. *Current Problems in Pediatric and Adolescent Health Care*, 52(6), 101204–101204. <https://doi.org/10.1016/j.cppeds.2022.101204>
- Mantey, D. S., Omega-Njemnobi, O., Ruiz, F. A., Vaughn, T. L., Kelder, S. H., & Springer, A. E. (2021). Association between observing peers vaping on campus and E-cigarette use and susceptibility in middle and high school students. *Drug and Alcohol Dependence*, 219, 108476–108476. <https://doi.org/10.1016/j.drugalcdep.2020.108476>
- Mantey, D. S., Clendennen, S. L., Springer, A. E., & Harrell, M. B. (2022). Perceived Parental Knowledge Reduces Risk for Initiation of Nicotine and Cannabis Vaping: A Longitudinal Study of Adolescents. *American Journal of Health Promotion*, 36(4), 623–632. <https://doi.org/10.1177/08901171211061941>
- Miech, R., Patrick, M. E., O'Malley, P. M., & Johnston, L. D. (2017). What are kids vaping? Results from a national survey of US adolescents. *Tobacco Control*, 26(4), 386–391. <https://doi.org/10.1136/tobaccocontrol-2016-053014>
- Rohde, J. A., Vereen, R. N., & Noar, S. M. (2021). Adolescents and Young Adults Who Vape or Are Susceptible to Vaping: Characteristics, Product Preferences, and Beliefs. *Substance Use & Misuse*, 56(11), 1607–1615. <https://doi-org.trmproxy.mnpals.net/10.1080/10826084.2021.1942052>
- Shan, L., & Azagba, S. (2022). Longitudinal associations of tobacco-related social media

involvement with cigarette and e-cigarette initiation among US adolescents. *European Journal of Pediatrics*, 181(1), 189–196. <https://doi.org/10.1007/s00431-021-04166-0>

Wang, L., Chen, J., Ho, S. Y., Leung, L. T., Wang, M. P., & Lam, T. H. (2020). Exposure to e-cigarette advertising, attitudes, and use susceptibility in adolescents who had never used e-cigarettes or cigarettes. *BMC Public Health*, 20(1), 1349–1349. <https://doi.org/10.1186/s12889-020-09422-w>

Webb, J., Peerbux, S., Ang, A., Siddiqui, S., Sherwani, Y., Ahmed, M., MacRae, H., Puri, H., Majeed, A., & Glasner, S. (2022). Long-Term Effectiveness of a Clinician-Assisted Digital Cognitive Behavioral Therapy Intervention for Smoking Cessation: Secondary Outcomes From a Randomized Controlled Trial. *Nicotine & Tobacco Research*, 24(11), 1763–1772. <https://doi-org.trmproxy.mnpals.net/10.1093/ntr/ntac113>