Spring 2021

A Community-Based Pilot Prevention Program to Prevent Electronic Cigarette Use Among Teens

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A Community-Based Pilot Prevention Program to Prevent Electronic Cigarette Use Among Teens

A Scholarly Project Presented to the Faculty of the School of Nursing
Boise State University

In partial fulfillment of the requirements
For the Degree of Doctor of Nursing Practice

By

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Abstract

With over 3.6 million teens using tobacco, we have lost the opportunity to create the first tobacco-free generation. This DNP project presented the CATCH My Breath (CMB) E-Cigarette and JUUL prevention program to local teens experiencing a global pandemic. The program was condensed from a 4-week multi-session offering into a one-day seminar with an intense focus on student safety and engagement. While contextual factors significantly impacted the project implementation, the content remained largely the same. This accounted for the achievement of many of the project’s desired outcomes. Participants increased their baseline knowledge of the effects and dangers of e-cigarette use with 87% of respondents strongly agreeing or agreeing with, “I learned a lot about e-cigarettes from the CATCH My Breath program.” Additionally, 87% agreed or strongly agreed with, “The CATCH My Breath program would be effective in getting kids not to vape.” Though the one-day offering was sub-optimal, a program shorter than the recommended 4-weeks could prove to be very successful.

Keywords: E-cigarettes, vaping, tobacco prevention, teens
A Community-Based Prevention Program Pilot to Prevent Electronic Cigarette Use Among Teens

The use of electronic cigarettes (e-cigarettes) has skyrocketed since their introduction to the US market in 2007 (Campbell-Heider & Snow, 2016). E-cigarettes have risen so sharply in popularity that they are now the most commonly used tobacco product among youth in the United States (U.S. Department of Health and Human Services, 2016). The National Youth Tobacco Survey showed that e-cigarette use among teens increased from 1.5% to 20.8% from 2011 to 2018 (Cullen et al., 2018). It is especially concerning that 78% of this increase happened in a single year from 2017-2018, increasing from 11.7% to 20.8% (Cullen et al., 2018). While the public and even healthcare professionals may have once considered e-cigarettes to be safer than combustible cigarettes, in early 2020 the Centers for Disease Control and Prevention (CDC) identified an outbreak of e-cigarette, or vaping, product-use associated lung injury (EVALI) with over 2800 cases reported with 68 deaths (Centers for Disease Control and Prevention, 2020).

Problem Description

Problem Background

An electronic cigarette is a battery-operated device that emits doses of vaporized nicotine, or non-nicotine solutions, for the user to inhale. It aims to provide a similar sensation to inhaling tobacco smoke, without the smoke (Biggers, 2018). E-cigarettes include a diverse group of devices that allow users to inhale an aerosol, which typically contains nicotine, flavorings, and other additives (U.S. Department of Health and Human Services, 2016). E-cigarettes are now the most commonly used tobacco product among youth, surpassing conventional cigarettes in 2014 (U.S. Department of Health and Human Services, 2016).
A shocking 3.6 million middle and high school students are using e-cigarettes (Centers for Disease Control and Prevention [CDC], 2019). Enticing flavorings and targeted marketing make electronic cigarette use incredibly appealing to youth (CDC, 2019) however, many teens have no idea the vape pods they use contain high levels of nicotine. When asked what they thought they were vaping, up to 25% of teens thought they were vaping only flavoring, unaware of the addiction the nicotine is causing (U.S. Department of Health and Human Services, 2018).

According to Healthy People 2020, the National Youth Tobacco Survey (NYTS) is a school-based survey that collects information on tobacco use from middle school (grades 6-8) and high school (grades 9-12) students. NYTS includes measures on tobacco-related behaviors, attitudes, beliefs, and exposure to pro- and anti-tobacco influences ("National Youth Tobacco Survey," 2018). The use of surveys can establish a pattern of behaviors and attitudes that may need to be addressed in the assessment phase prior to the initiation of a population-based nursing intervention (Curley & Vitale, 2016). The NYTS is valuable data set for understanding tobacco use among teens.

**Susceptibility of Youth.** Many factors contribute to the susceptibility of youth to the use of e-cigarettes in middle school, such as age, relationships, and race. Early adolescence is a period where these students begin to emotionally separate from their parents and begin to identify strongly with their peers. This stage is also marked by early exploration of risky behaviors, such as smoking (Christie & Viner, 2005). Race and ethnicity could also be a risk factor for early tobacco use. A data review of the NYTS by the Centers for Disease Control and Prevention (CDC) found for the years 2014–2017, ever-use and current use of any tobacco product among U.S. middle and high school students were highest among Native
Hawaiians/Other Pacific Islanders and American Indians/Alaska Natives and lowest among Asians (Odani, Armour, & Agaku, 2018).

**Impact of Flavoring.** By masking the harshness and soothing the irritation caused by tobacco smoke, flavors make it easier for beginners, primarily kids, to try the product and ultimately become addicted (Bach, 2018). As of 2017, researchers had identified more than 15,500 unique e-cigarette flavors available online. In addition to the more traditional candy and fruit flavors like cherry and chocolate, the liquid nicotine solutions are also being sold in such kid-friendly options as cotton candy, root beer float, and banana split. One study even uncovered over twenty different types of unicorn-flavored e-liquid, often paired with cartoon imagery, undoubtedly appealing to kids (Bach, 2018). More than 85% of e-cigarette users ages 12-17 use flavored e-cigarettes, and flavors are the leading reason for youth use (U.S. Department of Health and Human Services, 2016).

**Marketing and Youth.** From 2014-2016, the proportion of youth who reported exposure to at least one source of e-cigarette advertising climbed from 69 percent to 78 percent, accounting for more than 20 million teens nationwide (Rapaport, 2018). Exposure to e-cigarette advertisements is associated with higher odds of current e-cigarette use among middle and high school students (Marynak, Gentzke, Wang, Neff, & King, 2018). The same tactics that proved to be successful for traditional cigarettes such as using sex, romance, rebellion, and freedom have proved to be successful with E-cigarette advertising (Rapaport, 2018). One key difference in marketing in the current generation has been the overwhelming use of social media and video sites, such as YouTube. E-cigarette companies used individuals with large platforms, called influencers to promote the use of e-cigarette, such as JUULs to their large audience (The Truth Initiative, 2018).
Local Problem

Local high school teens are seen vaping on and around Brazosport Independent School District campuses regularly. When asked, students state that vaping is everywhere; their perception is more students vape than those who do not. Vaping is so prevalent in schools that during an all-access local news interview one teen stated, “You can do it right behind somebody and they wouldn’t know” (Gonzalez, 2018). Another one said, “I see it all the time. In the bathrooms. Sometimes in the classrooms” (Gonzalez, 2018). A local high school teacher claims she has not been adequately prepared to combat this growing problem (A. Donnelly, personal communication, February 9, 2019). She also stated the district has not provided formal training or education on e-cigarettes or vaping (A. Donnelly, personal communication, February 9, 2019). She sees students vaping on or around school grounds but feels helpless to stop it (A. Donnelly, personal communication, February 9, 2019).

Available Knowledge

The most frequently used electronic cigarette, the JUUL, contains the highest amount of nicotine per pod on the market and owns more than 50% of the market (The Truth Initiative, 2018). Most disturbing of all, when teens were asked what they thought they were vaping, up to 25% of them thought they were vaping only flavoring (U.S. Department of Health and Human Services, 2018), not understanding the highly addictive nicotine housed in their e-cigarette pods was taking them from casual, cool users, to addicted, dependent users. Each JUUL pod contains the equivalent amount of nicotine as a pack of cigarettes (The Truth Initiative, 2018). Informational sites, such as The Truth Initiative (2018) debunk myths such as vaping is “safer” than using combustible cigarettes, noting that “safer” doesn’t mean “safe.”
A 2018 consensus study report from the National Academies of Sciences, Engineering, and Medicine notes that substantial evidence exists that e-cigarette use increases the risk of teens converting to combustible cigarettes (2018). This is especially concerning as it appears the increasing use of e-cigarettes threatens the decades long trend of decreased smoking rates among young people (Simon, 2018). Interestingly, the trend of converting to combustible cigarettes from e-cigarettes does not appear to be bi-directional. Bold, et al. (2018) noted that cigarette use was not associated with future e-cigarette use but e-cigarette use was associated with future cigarette use. School and community-based tobacco prevention programs have proven to be successful in the past (Chen, Ren, Lin, MacDonell, & Jiang, 2012) to combat the previous smoking epidemic and seem to provide a natural option as a solution to begin to tackle the explosion of teenage vaping.

An evidence-based question was developed to begin to explore possible solutions to the complex problem of teenage vaping: In local teens, how does an education and awareness program about the effects of vaping affect initiation, or past 30-day use of e-cigarettes, compared to teens that do not participate in an education and awareness program? When searching for the best evidence to combat this problem, an overwhelming lack of published literature related to e-cigarette initiation prevention was noted. This can likely be attributed to relative newness of teenage electronic cigarette use, or vaping, phenomena. However, robust literature was available for prevention programs to inhibit combustible cigarette use. A total of nine articles were identified to critically analyze and synthesize. These articles were placed in two focus areas categories: long and short-term effects of adolescent smoking prevention programs and components of effective adolescent smoking prevention programs.

**Literature Review**
An electronic database search was conducted using the following databases CINAHL, PsychINFO, PubMed, Medline and ERIC. Using the Population, Intervention, Comparison, Outcome (PICO) format, the following search terms were used “teens and vaping and education”, “teens AND smoking AND prevention”. For ease of analysis and integration, only English language studies were evaluated. This final search was performed on March 12, 2019. This search resulted in nine articles for analysis. See the Literature Summary Table in Appendix A.

The studies were conducted in the United States, Canada, and Norway. Of the eight articles obtained, three were meta analyses, three were randomized control trials, one was a systematic review of randomized control trials, one was a quantitative analysis, and one was a review of meta analyses. All studies either reviewed or implemented adolescent smoking prevention programs. All studies focused on students generally over the age of 11 and under the age of 18 who were attending a public or private high school or junior high school.

All nine articles were evaluated for quality using the Johns Hopkins Evidence Level and Quality Guide evaluation tool, which rates evidence from Level I to Level V, with Level I being the highest quality (Dang & Dearholt, 2018). The Johns Hopkins tools are also used to assign a quality level to evidence, which can be rated as Level A, B, or C, with Level A evidence being the highest quality (Dang & Dearholt, 2018). Because the articles reviewed for this problem are randomized control trials (RCTs), systematic reviews of RCTs, or meta analyses, they are all considered to be Level I evidence. The articles discussed were all rated as a Level A or B.

**Synthesis of Evidence**

**Short and long-term effects of adolescent smoking prevention programs.** Two Level A Quality studies (Elder, et al., 1993; Skara & Sussman, 2003) were critically appraised in this
category. Elder, et al., implemented and evaluated the effectiveness of a long-term tobacco prevention program for middle school students that utilized college students as community change agents (Elder et al., 1993). This study noted that an emphasis on interpersonal behavior aimed at countering peer pressure to initiate use of cigarettes and smokeless tobacco was a key component of an effective adolescent smoking prevention program (Elder et al., 1993). Skara and Sussman (2003) performed a review of 25 long-term adolescent smoking prevention programs and noted reductions in the rate of initiation of smoking both in the short-term and long-term. Short-term results noted a 30-50% reduction of tobacco initiation within 24 months post program participation (Skara & Sussman, 2003). Social influences and social skills training were two approaches both studies deemed necessary for both short and long-term impact.

**Components of effective adolescent smoking prevention programs.** Four Level A Quality studies were evaluated and appraised for this focus area (Chen et al., 2012; Dobbins, DeCorby, Manske & Goldblatt, 2008; Jøsendal, Aaro, Torbjorn, & Rashash, 2005; La Torre, Chiaradia, & Riccardi, 2005). A Norwegian study noted eight evidence-based design features school-based prevention programs should include, as detailed as noting the number of classroom sessions that should be provided (Jøsendal et al., 2005). This study was also based on a social influence approach and noted that this approach proved to be effective at reducing smoking rates in the studied population.

A review of seven meta-analyses (La Torre et al., 2005) found that effective adolescent smoking prevention programs had core components that contributed to their success. These components included, “sustained application, booster sessions over several years; reinforcement in the community; involvement of parents and the mass media; programming smoking prevention activities within a more comprehensive school health promotion program” and were
the ones that exhibited the most effective results (La Torre et al., 2005, p. 285). Dobbins, et al., (2008) also found that interventions that focused on social norms, influences, and reinforcement were most effective in reducing tobacco initiation.

In a meta-analysis completed by Pentz (1999), there was a focus on multi-component programs. These programs included a school-based program coupled with supportive parents, appropriate media and organized community support showed the most sustained results for tobacco prevention (Pentz, 1999). The author further notes successful programs include social skills for students to learn assertiveness (Pentz, 1999). An article by Chen et al., (2012) echoed the importance of including behavior-based interventions for teens, and additionally noted that partnering with community-based organizations offers the additional advantages of being able to reach teens after school and reinforce prevention strategies through the use of social norms.

Overall this body of literature noted not only the effectiveness of adolescent programs, but also the importance of addressing the impact of social influences on teens’ decision to begin, or continue, smoking. These studies also noted teaching students refusal skills and how to assert themselves are key components for effective programs. By learning how to assert themselves, these teens can combat social influences and peer pressures that beckon them towards tobacco use.

After the completion of the literature review, a publication noting the effectiveness of the only electronic cigarette prevention program was published. Kelder, et. al (2020) found that incidences of middle school students ever using e-cigarettes were lower in schools that implemented the CATCH My Breath program. This program consists of 4 interactive sessions and is the first e-cigarette prevention program to be developed, implemented, and evaluated in the US (Kelder, et al., 2020). Students are provided e-cigarette education, refusal techniques,
and positive peer influence to equip students to live a life free from nicotine and electronic cigarettes.

**Recommendations for Project**

All but one study in this appraisal noted programs based on the social influences model proved to be the most effective (Dobbins et al., 2008; Elder et al., 1993; Jøsendal et al., 2005; Pentz, 1999; Skara & Sussman, 2003). These same studies also identified that the development of skills to resist peer and social pressures to smoke are essential (Dobbins et al., 2008; Elder et al., 1993; Jøsendal et al., 2005; Pentz, 1999; Skara & Sussman, 2003). Reinforcement of these skills over multiple “booster” sessions were deemed necessary for comprehensive programs (La Torre et al., 2005; Jøsendal et al., 2005). These findings are especially significant as prevention programs will need to be designed and implemented in the near future to attempt to stem the rapidly growing tide of teenage vaping. Currently the only e-cigarette prevention program available is titled CATCH My Breath E-Cigarette Prevention Program. This program was recently noted to be effective in reducing the incidence of middle school student participants ever-using electronic cigarettes (Kelder, et. al., 2020).

**Rationale**

**Theoretical Model**

After a thorough review of the evidence, it appears the best path forward to address this growing problem is the adoption and implementation of a school or community-based prevention program designed with evidence-based interventions. Many previously implemented adolescent smoking prevention programs were designed with a strong foundation and integration of the social influences model (Dobbins et al., 2008; Elder et al., 1993; Jøsendal et al., 2005; Pentz, 1999; Skara & Sussman, 2003). Creating a school or community-based smoking prevention
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program that integrates this model with an emphasis on peer attitudes and behaviors will better ensure the adoption and success of this program.

The Social Influences Model

The social influences model (see Appendix B) was developed and refined by Herbert C. Kelman (Kelman, 1974). This model was noted to be foundational in the design of many studies appraised for this proposal (Dobbins et al., 2008; Elder et al., 1993; Jøsendal et al., 2005; Pentz, 1999; Skara & Sussman, 2003) and seemed a logical choice for this evidenced-based pilot program. Peer influence has been considered the best predictor of adolescent smoking initiation in many studies (Vitoria, Salgueiro, Silva, & De Vries, 2009); Kelman’s model of social influences provides a framework for explaining how this peer influence occurs.

Kelman defined the term social influence to “refer to socially induced behavior change” (Kelman, 1974, p. 127). He further noted that “social influence is said to have occurred when a person changes his behavior as a result of induction by another person or group” (Kelman, 1974, p. 128). The term induction is used to describe when an influencing agent presents, or makes available, “some kind of behavior and communicates an expectation of the probable effects of adopting that behavior” (Kelman, 1974, p. 128). This induction can be deliberate or unintentional (Kelman, 1974). Additionally, changes resulting from induction can be overt or covert, positive, or negative.

Kelman also noted that three different processes of influence can be distinguished: compliance, identification, and internalization (Kelman, 1958). Compliance is defined as occurring when an individual adopts the desired, or induced, behavior to gain acceptance or influence (Kelman, 1958). Identification is deemed to have happened when individuals adopted the desired, or induced, behavior to gain or maintain a relationship with a coveted group or
person (Kelman, 1958). Internalization is assumed to occur when individuals accept influence after perceiving the content of the induced behavior is rewarding and oftentimes congruent with their value systems (Kelman, 1958). These processes help explain how the presence and influence of peers who vape heavily impact their curiosity and eventual decision to try electronic cigarettes.

**Project Framework**

**Logic model.** A program evaluation model was developed that clearly identifies stakeholders, resources needed and available, planned activities, outcomes, as well as an assessment of the impact the program has made on the focus population (Moran, Burson, & Conrad, 2017). This program evaluation model was based on the Kellogg Foundation Logic Model (W.K. Kellogg Foundation, 2004). A detailed logic model was created for this Scholarly Project (see Appendix C).

**Catch my breath.** CATCH is the acronym for the Coordinated Approach to Child Health organization (Coordinated Approach to Child Heath [CATCH], 2019). CATCH My Breath is an e-cigarette and JUUL prevention program created by the CATCH organization, which provides educational curriculum and training activities to provide students with the knowledge and skills they need to resist peer pressure and social media influences (Coordinated Approach to Child Heath [CATCH], 2019a). CATCH provides access to all training sessions free of charge for organizations choosing to implement the CATCH my breath curriculum in school or community settings. As noted by Kelman’s social influence session, (1958) peer influence can induce social change. Other studies (Vitoria, Salgueiro, Silva, & De Vries, 2009) also note peer influence is a predictor for future adolescent smoking. The focus on addressing and standing strong against peer pressures makes this program an ideal fit for adolescents.
Specific Aims

The community-based electronic cigarette prevention program pilot was implemented with high school students participating in a local non-profit summer teen development program called Summer Challenge. Summer Challenge is provided free-of-charge to local teens through True to Life Ministries (TTLM). The goals of Summer Challenge are to prepare students for future success through character and leadership skill development, along with job readiness training. Students attend Summer Challenge four days per week for four weeks. Sessions are presented to students by TTLM’s Student Success Coaches or community leaders and volunteers. This pilot was aimed at equipping these teens with knowledge about the dangers of vaping, as well as a core set of skills to use when confronted with a request to smoke, or vape, from a peer through the use of the CATCH My Breath E-cigarette Prevention Program. In addition, this pilot program focused on training the student success coaches at True to Life Ministries to be program facilitators of the CATCH My Breath E-cigarette Prevention Program to continue to provide this program to future cohorts of Summer Challenge students.

Context

Population

According to the 2017 U.S. Census Bureau, an estimated 41.9 million young people, aged 10-19 live in the United States (U.S. Census Bureau, 2018). Texas is home to the nearly 5.4 million students (Texas Education Agency, 2019). Teens have long been known to engage in risky behaviors such as drinking, smoking, and drug use, however, according to the Monitoring the Future (MTF) Survey teen use of many substances, such as marijuana and other illicit drugs, have held steady in the lowest rates since the survey inception in the 1970’s (National Institute on Drug Abuse [NIDA], 2018).
Local Environment

Local schools are the cornerstone of knowledge, growth, and development for young people. Social skills developed during this phase of a student’s life can influence them for the rest of their adult life. The local school district assumes this responsibility with great reverence and seeks to prepare its students well for broad success in their future. One such school district is Brazosport Independent School District. Brazosport Independent School District (BISD) is a school district located in Southeast Texas. For the 2016-2017 school year, BISD was home to 12,441 students (The Texas Tribune, 2019).

The Brazosport Independent School District, established in 1944, encompasses 200 square miles in Brazoria County, 8 municipalities (Clute, Freeport, Jones Creek, Lake Jackson, Oyster Creek, Quintana, Richwood and Surfside Beach) and is comprised of ten elementary, two middle, three intermediate and two high schools (Brazosport ISD [BISD], 2019a). BISD schools have won multiple awards, including being named to US News & World Report’s list of America’s Best High Schools (BISD, 2019c). This school district is also home to State Champion Robotics Team and State Champion welding programs (BISD, 2019c). Opportunities for student athletes abound in the district’s two high schools as students are offered football, volleyball, cross country, basketball, soccer, baseball, softball, track and field, tennis, golf, swimming, diving, water polo, powerlifting, and wrestling (Brazosport ISD [BISD], 2019b).

Relevant Elements for Project Setting

BISD currently has over 780 teachers with over 1600 total employees (Brazosport ISD [BISD], 2019f). With nearly 55% of students considered economically disadvantaged, BISD has access to multiple federally supported programs (Brazosport ISD [BISD], 2019e). The district employs a district homeless liaison, a student services director, and an executive director of
student services, to provide resources and assistance to families and students in need (Brazosport ISD [BISD], 2019d). Local outreach programs, such as the Brazosport Cares Food Pantry, Communities in Schools, and the Community Action Center, are also engaged in supporting the needs of district students and families (BISD, 2019d). These resources are in addition to the local campus counselors employed at each school.

True to Life Ministries is an example of a local outreach partner that provides district-wide support through a variety of avenues. True to Life Ministries (TTLM) is an independent, faith-based, non-profit organization founded in 2009 with the mission of cultivating hope and introducing people to a true life in Christ (True to Life Ministries, 2019). It is located in the heart of Lake Jackson, Texas which is a part of the greater Brazosport community. TTLM state on their website that they “are committed to helping students and adults transition out of poverty and move towards self-sufficiency” (True to Life Ministries, 2019). TTLM supports BISD through mentor programs, 1:1 in-school student support programs, and through summer programs for local district teens. TTLM’s summer internship program is called Summer Challenge. This program is open to all Brazosport teens ages 15-18 who can successfully pass a drug/alcohol screen, are available for the 32 hours per week the program requires, and are willing to commit and adhere to the personal accountability standards put forth by TTLM (True to Life Ministries [TTLM], 2018). Teens must apply and be accepted into one of the two cohorts of the 4-week program. In addition to education and training, interns are paid a stipend of $100 per week and have transportation and meals provided to them while participating in the program (TTLM, 2018). Students are not required to be of a particular faith or a member of a church, but since the organization is faith-based, interns are expected to participate in regular discussion-based Bible studies (TTLM, 2018).
As previously discussed, an additional partner for this project is the CATCH My Breath Youth E-cigarette prevention program. This program provides an interactive, structured youth electronic cigarette prevention program for no-cost to schools and school partners (CATCH, 2019b). The CATCH organization was created in the late 1980’s and funded by the National Heart Lung and Blood Institute through a collaborative effort by four large universities who first focused on cardiovascular health for children and created the largest school-based health promotion study ever conducted in the United States (CATCH, 2019). Researchers at the University of Texas Health Science Center at Houston (UTHealth) School of Public Health were founding partners of the CATCH Global Foundation, formed in 2014, and they continue to test and improve the CATCH program. MD Anderson was also a founding partner of the CATCH Global Foundation and has provided a four-year, $3.3 million-dollar funding agreement for curriculum development and infrastructure (CATCH, 2019). CATCH is used across the US, Canada, and Ecuador, is backed by 25 years of research, and their curriculum is used in 10,000 schools and communities, with use by >50% of Texas schools (CATCH, 2019). CVS Health has generously provided a three-year, $500,000 grant to provide free access for middle and high schools to the CATCH My Breath curriculum (Coordinated Approach to Child Health [CATCH], 2017).

**Readiness for Change**

Partnering with TTLM to provide a community-based tobacco prevention program focused on electronic cigarettes directly supports the organization’s mission to provide support and resources to adults and students as they continue to plan for their future. The summer program called Summer Challenge is a “fun, intensive 4-week program emphasizing team building, spiritual growth, and job-readiness. Students gain practical work experience through
our Social Enterprise, Refresh Boutique, and other job shadowing opportunities with local business partners. Students meet community leaders, develop solid communication skills, facilitate service projects, and discover ways to overcome the difficult barriers they face” (True to Life Ministries, 2019). The True to Life Ministries Summer Challenge program is the ideal implementation site as their goal of providing the skills, resources, and community of support that people need to change their lives (True to Life Ministries, 2019).

**Strengths and Weaknesses**

An existing curriculum in the CATCH My Breath E-cigarette Prevention Program that was created with guidance from evidence-based best practices has been identified as a strength for this Doctor of Nursing Practice (DNP) scholarly project. The project would require minimal financial resources, as the CATCH My Breath Program is provided to the TTLM Summer Challenge program free-of-charge through the CATCH Foundation. Additionally, the TTLM Summer Challenge program features an existing platform to provide this curriculum to students. The Summer Challenge program is open for application to all students in local school district students. The BISD superintendent has expressed support for utilizing this class to perform the school-based prevention program project, and offered to explore other options if the DNP scholarly project needed a wider focus to include more students in additional grades. This was identified as a potential opportunity for this DNP scholarly project.

True to Life Ministries Executive Director, Leslie Carter, has offered to be the DNP project champion during the design phase, and recommended the inclusion of other TTLM leaders as the project planning progresses. The implementation phase of three months was noted to be an acceptable timeframe for the organization. The Executive Director immediately recognized the benefit of this project to both the district students and the greater Brazosport
Community. An additional strength of this project is the partnership with the CATCH Foundation. A CATCH My Breath program manager has been provided as a resource for support or guidance from The CATCH Foundation.

It was noted that a weakness of this DNP project was that the implementation of a community-based tobacco prevention program could potentially take time away from other important topics. The core threats to this project were identified to be a shift in focus or priorities for True to Life Ministries, key personnel changes, an unreceptive summer cohort, as well as any unforeseen scheduling difficulties with the TTLM team.

**Memorandum of Understanding**

A memorandum of understanding (MOU) was completed with the Student Services Coordinator at True to Life Ministries. This MOU outlines the terms and understanding between the DNP student and TTLM to present the CATCH My Breath e-cigarette prevention program to the Summer Challenge students during Summer, 2020. A signed copy of this MOU can be found in Appendix G.

**Interventions**

The CATCH my breath e-cigarette prevention program is presented in four sessions in addition to a facilitator training session. The four sessions are titled: Designed for Addiction, What Could Go Wrong?, Co-Create and Hack the System, and Take Control of Your Life (CATCH, 2019a). The facilitator session serves as a training session for peer group facilitators prior to launching the training sessions. Each session is approximately 40 minutes in length containing an introduction, direct instruction, and one or two individual or group activities. Quizzes are provided for each of the four sessions to evaluate learning. Additionally, there is a pre and post-program survey for students. The results of the pre and post surveys are submitted
to the CATCH My Breath team who return the raw data within 3-5 days (M. Blanco, personal communication, June 17, 2019). The four sessions are presented to the first cohort of Summer Challenge students in June 2020, and the same four sessions are presented to the second cohort of Summer Challenge students in July 2020.

**Logic Model**

The logic model (Appendix C) clearly outlines the desired long-term and intermediate outcomes as a result of implementing the CATCH My Breath program to Summer Challenge students as well as the resources, inputs, activities, and outputs needed to achieve those outcomes. The outcomes developed for the Scholarly Project are:

**Short-term outcomes**

1. The Catch My Breath (CMB) curriculum, content, and design are developed and approved to meet the needs of Summer Challenge students at TTLM by March 2020.

2. After completing CMB Session 1, 80% of Summer Challenge students in both cohort 1 and cohort 2 will score a grade of 75% or better on the 6 question CMB High School session 1 quiz, or increase their score by 10% when compared to the same quiz administered before Session 1 is presented.

3. After completing CMB Session 2, 80% of Summer Challenge students in both cohort 1 and cohort 2 will score a grade of 75% or better on the 4 question CMB High School session 2 quiz, or increase their score by 10% when compared to the same quiz administered before Session 2 is presented.

4. After completing CMB Session 3, 80% of Summer Challenge students in both cohort 1 and cohort 2 will score a grade of 75% or better on the 4 question CMB High
School session 3 quiz, or increase their score by 10% when compared to the same quiz administered before Session 3 is presented.

5. After completing CMB Session 4, 80% of Summer Challenge students in both cohort 1 and cohort 2 will score a grade of 75% or better on the 4 question CMB High School session 4 quiz, or increase their score by 10% when compared to the same quiz administered before Session 4 is presented.

6. 80% of Summer Challenge students participating in cohort 1 or cohort 2 will answer “Strongly Agree” or “Agree” when asked the question: “I learned a lot about E-cigarettes from the CATCH My Breath program” on the CMB student post-program teacher survey completed 1 week after the Session 4 CMB presentation.

7. 80% of TTLM staff respond “Agree” or “Strongly Agree” when asked “I think all Summer Challenge students should go through the CATCH My Breath program” in a post-program teacher survey administered within 10 days after the first and again after the second Summer Challenge 2020 cohorts have completed the program.

8. 100% of Student Success Coaches at True to Life Ministries are taught by the Program Manager in a Train the Trainer session to be facilitators of the CATCH My Breath E-cigarette prevention program by August 20, 2020.

Intermediate Outcomes

9. 80% of the TTLM Student Services Coordinators answer “Agree” or “Strongly Agree” when asked if the CMB curriculum, content, and design met the needs of TTLM’s Summer Challenge students 6 months after program completion.
10. Summer Challenge students who participated in the CATCH My Breath program delay initiation or continuation of their rate of cigarette (both electronic and combustible) use 6 months after program participation.

11. Summer Challenge students continue to understand that E-cigarettes are addictive and harmful to their health. This is demonstrated by students in cohorts 1 and 2 identifying at least one way an addiction could affect their current identity when asked 6 months after program participation.

12. Summer Challenge students will resist advertising pressure to experiment with e-cigarettes. This will be demonstrated by 80% of students in cohorts 1 and 2 correctly answering this question: “Why do e-cigarette companies want you to use often and become addicted to their products?” Answer: “So they can make money.” Students will be asked to correctly identify the answer to this question on a phone or email interview 6 months after program completion.

13. Summer Challenge students will continue to develop skills to resist peer pressure to use E-cigarettes. This will be demonstrated by students identifying at least 2 reasons they choose not to use e-cigarettes or 2 reasons to stop using e-cigarettes on a phone or email interview 6 months after program completion.

14. Summer Challenge students continue to increase their knowledge about E-cigarettes and influence peers and friends not to use E-cigarettes. This will be demonstrated by students naming at least two friends they shared their learnings from the CMB program lessons with on a phone or email interview 6 months after program completion.
15. CATCH My Breath E-cigarette prevention program continues to be taught by Student Success Coaches to future Summer Challenge participants beginning in Summer 2021.

Long-term outcomes

16. The CMB e-cigarette prevention program is adopted as regular programming for Summer Challenge students.

17. Students who participated in this school-based prevention program maintained a reduction of their rate of cigarette (both electronic and combustible) initiation, or continued non-use of electronic cigarettes 3 years after participating in this program.

For purposes of the Scholarly Project, Outcomes 1 through 8 were evaluated. More details can be found in the complete Logic Model (Appendix C) and the Outcomes Evaluation Table (Appendix E).

Project planning began with seeking a partnership and agreement of support from True to Life Ministries executive leadership. The permission and support of TTLM executive leadership facilitated connection with the Student Services Director and the Student Success Coaches. The Student Success Coaches design the programming for each Summer Challenge program and lead many of the Summer Challenge sessions. Access to meeting space, presentation equipment, and permission to meet with TTLM Student Success Coaches for planning meetings are integral resources needed for successful implementation. These efforts contributed to the success of Outcome 1.

Permission to access and use the CATCH My Breath (CMB) program was also integral to the success of this project. Outcomes 1-8 are impacted by the approval to use the CMB curriculum. While CMB is frequently offered as a school-based curriculum, it can be
utilized in any setting from after-school programs, to church groups, and community-based clubs. The classroom style sessions held for the Summer Challenge students offer an ideal setting for the implementation of the CMB curriculum. Access to the Summer Challenge students and their classroom time helped achieve Outcomes 2-7.

In collaboration with True to Life Ministries’ Summer Challenge Program the CATCH My Breath E-cigarette Prevention Program was planned to be offered to both Summer 2020 Summer Challenge cohorts. Each cohort typically contains approximately 25 students and lasts for 4 weeks. The 4 CMB sessions were to be taught to Summer Challenge participants over 4 days in a single week during both cohorts of Summer Challenge.

**Correlation of Interventions with the Theoretical Model Elements**

The CATCH My Breath program is beautifully and logically grounded in Kelman’s social influences model. Kelman’s social influences model (Appendix B) focused on socially induced behavior change. Kelman (1958) used the term “induction” to describe the influence one person (or factor, or agent) has on another when communicating an expectation of the adoption of a particular behavior. This influence can result in positive or negative changes. Students who learn the truth about electronic cigarettes and vaping through the CATCH My Breath program can serve as positive induction agents inducing their peers to resist vaping even when it is commonplace in their schools and communities. Kelman (1974) used the term “compliance” to describe when an individual adopts the desired or induced behavior to fit in or be accepted by others. The CATCH My Breath program aims to show students that non-use of electronic cigarettes is the norm, that e-cigarettes are addictive and hurtful, and gives them the tools to resist peer pressure, and positively influence their friends not to use electronic cigarettes.
(CATCH, 2019a). Kelman’s (1974) internalization process is demonstrated when students influence their friends not to use electronic cigarettes.

**Timeline**

The planning phase for this DNP Scholarly Project began with a literature search and problem definition in the Fall of 2018 and continued until formal presentation of the Scholarly Project Proposal in the Spring of 2020. The implementation phase began in the Summer of 2020 with data analysis in Fall of 2020 and dissemination occurring in Spring of 2021. Additional details on the timeline and Scholarly Project plan can be found in Appendix D.

**Measures**

Quantitative and qualitative data were gathered during the implementation phase of the DNP Scholarly Project through the use of pre-and-post-program surveys and quizzes, as well as feedback gathered from stakeholders. These data were observed, measured, verified, evaluated, and shared with the stakeholder team (Reavy, 2016). Graphs and charts were created from these data which better inform the stakeholder team and helps guide future decisions. The feedback provided at the culmination of the program for both cohorts of Summer Challenge students could be used to evaluate the possibility of offering the CATCH My Breath program to future cohorts of Summer Challenge students.

The e-cigarette prevention program is titled The CATCH My Breath (CMB) Program. This program was created and sponsored by the CATCH Foundation. The CMB high school program consists of four sessions and utilizes peer facilitators, videos, handouts, PowerPoint slides, and hands-on activities (CATCH, 2019a).

**Data Collection Tools**
Data was collected through the use of two primary methods: pre-and-post program surveys completed by the student participants, and session quizzes completed before and after each CATCH My Breath session. Additionally, a post-program teacher survey was to be completed by the TTLM Student Success Coaches.

For Outcome 1, the program implementation plan and related tool is provided by The CATCH Foundation. This tool was to be completed by the program manager with input from the stakeholder team at TTLM (see Appendix K).

For Outcome 2, the Session 1 quiz provided by the CATCH foundation is a 5-question assessment which includes 4 True/False questions and 1 multiple choice question (see Appendix L). This quiz also assesses student participant’s knowledge of nicotine, its impact on the body, and its presence in popular brands of electronic cigarette devices. This quiz was administered to the student participants before and after participating in Session 1 of the CATCH My Breath program.

For Outcome 3, the Session 2 quiz assesses student participant’s knowledge of nicotine, its impact on the body, and social consequences of using e-cigarettes (see Appendix M). This quiz was administered to the student participants before and after participating in Session 2 of the CATCH My Breath program.

For Outcome 4, the Session 3 quiz provided by the CATCH foundation is a 5-question assessment which includes 3 True/False questions and 2 multiple choice questions (see Appendix N). The Session 3 quiz assesses student participant’s knowledge of legal age limits for e-cigarettes, marketing laws, and advertising tactics of e-cigarette companies. This quiz was administered to the student participants before and after participating in Session 3 of the CATCH My Breath program.
For Outcome 5, the Session 4 quiz assesses student participant’s knowledge of the appeal of flavored nicotine products, the dangers of nicotine liquid, reinforces exit strategies and clarifies the student’s choice to be e-cigarette free (see Appendix O). This quiz was administered to the student participants before and after participating in Session 4 of the CATCH My Breath program.

For Outcome 6, the pre-program student survey is a 39-question tool that gathers information from student participants of the CATCH My Breath program (see Appendix P). The pre-program student survey gathers demographic data as well as their history, their family history, and their friends’ habits of vaping or smoking. This survey also gathers data about the student’s attitudes and beliefs about smoking and vaping as well as information about their current and past 30-day e-cigarette use. The post-program student feedback survey is a 48-question tool that gathers information from student participants of the CATCH My Breath program (see Appendix Q). Questions in both surveys are presented as multiple choice and using a Likert-type scale. The post-program student feedback survey mirrors the pre-program student feedback survey for the first 39 questions. The remaining 9 questions solicit feedback from students and assesses knowledge gained from the program, asks about their current and past 30-day e-cigarette use, their likelihood to vape in the future, assesses their attitudes and beliefs about vaping and the CATCH My Breath program. The goals for analysis of these data are to gather baseline data and feedback directly from program participants of the CATCH My Breath program as well as assess knowledge gained through participation of the CATCH My Breath program.

For Outcome 7, the post-program teacher survey is a 4-question tool that gathers information from the TTLM Student Success Coaches (see Appendix R). Questions are
presented as multiple choice and using a Likert-type scale. Additionally, there is an area to provide written comments and feedback. The post-program teacher survey is provided directly from The CATCH Foundation. This survey solicits feedback from TTLM Student Success Coaches regarding their satisfaction with the CATCH My Breath program, whether or not the program added value to the Summer Challenge program, recommendations for continuing to offer the CATCH My Breath Program to future Summer Challenge students, as well as additional written feedback and comments.

For Outcome 8, an audit sheet is used to track the Student Success Coach’s (SSC) name and the date they were trained (Appendix S). This audit sheet tracks all SSC training to ensure 100% of the TTLM SSCs are trained as facilitators of the CATCH My Breath program.

**Contextual Factors**

Permission to use all program materials and tools for this Scholarly Project was provided by The CATCH Foundation. With the exception of the Student Success Coach training audit tool, all other tools were created and provided free-of-charge from The CATCH Foundation. From 2018-2019, the CATCH My Breath Program and subsequent data collection tools have been used in over 1100 US schools reaching over 326,000 students during the 2018-2019 school year. A recently published study from The CATCH Foundation noted ever e-cigarette use was lower among middle schools that implemented the CATCH My Breath program than among those that did not. The CMB program is noted to be the first e-cigarette prevention program developed and has been shown to have positive effects on “ever” e-cigarette use for students in central Texas (Kelder et al., 2020). These recent findings were shared and discussed with the TTLM stakeholder team as reassurance of the effectiveness of the CMB program.
Administering pre and post session quizzes helps achieve Outcomes 2-5. Session quiz data were collected via pen and paper. The quizzes were printed directly from the CATCH website and distributed to the students at the end of each session. Once completed the DNP student gathered the paper quizzes. The students were instructed to leave their names off of their quiz, as the data will be aggregated and analyzed. This helped protect the identity and privacy of each student participant. The CATCH Foundation does not require these quizzes to be submitted and TTLM does not require the quizzes stay on-site. The DNP student was able to take the quizzes off-site to aggregate and analyze the data provided by these quizzes. Precautions were taken to ensure the quizzes were kept secure. These precautions included placing the completed quizzes in a locking file folder and transporting them to the DNP student’s locking employee office. Only the DNP student had access to the quizzes.

The completion of pre-and-post program surveys demonstrates achievement of Outcomes 6 and 7. The pre-program student survey provides a baseline to compare the same questions and answers to the post-program student survey. As noted previously, 39 of the 49 questions on the post-program student survey match the pre-program survey which allows for direct pre-and-post comparison. The pre-and-post program student and teacher surveys are completed online and sent to the CATCH Foundation program manager. The CMB program manager returned the deidentified raw data back to the DNP student within 2-3 business days. This helped to protect the identity and privacy of the student participants and the program facilitators.

**Analysis**

For Outcome 1, the program implementation guide reviews the program content and outlines the plans for the program’s 4-session implementation during the Summer Challenge program. As this tool was for planning purposes only, no analysis was performed.
For Outcomes 2-5 session quizzes for each module are provided by the CATCH Foundation. These quizzes were administered immediately before and after each session is presented to the students. The quiz taken prior to the session presentation was compared with the same quiz taken after the session is completed.

For Outcome 2, the goals for analysis of these data were to assess baseline knowledge of nicotine in electronic cigarettes and to quantify an increase or decrease in quiz scores after participating in Session 1 of the CATCH My Breath program. The quantitative data set provided descriptive statistics for determining percentage increase (or decrease) in participants’ baseline score for the Session 1 quiz. Additionally, the data provided a comparison of aggregate mean scores for each test item using a pre-then-post design following educational interventions. Additionally, two separate measurements were to be obtained through surveys at the end of Cohort1 and Cohort 2 of the Summer Challenge Program.

For Outcome 3, the quiz was administered to the student participants before and after participating in Session 2 of the CATCH My Breath program. The goals for analysis of these data were to assess baseline knowledge of nicotine in electronic cigarettes and their social consequences and to quantify an increase or decrease in quiz scores after participating in Session 2 of the CATCH My Breath program. The quantitative data set provided descriptive statistics for determining percentage increase (or decrease) in participants’ baseline score for the Session 2 quiz and comparison of aggregate mean scores for each test item using a pre-then-post design following educational interventions.

For Outcome 4, the Session 3 quiz was administered to the student participants before and after participating in Session 3 of the CATCH My Breath program. The goals for analysis of these data was to assess baseline knowledge of age limits for e-cigarettes, marketing techniques,
and manipulative strategies used by big tobacco companies and to quantify an increase or decrease in quiz scores after participating in Session 3 of the CATCH My Breath program. The quantitative data set provides descriptive statistics for determining percentage increase (or decrease) in participants’ baseline score for the Session 3 quiz and comparison of aggregate mean scores for each test item using a pre-then-post design following educational interventions.

For Outcome 5, the goals for analysis of the Session 4 quiz data were to assess baseline knowledge of the impact of flavoring nicotine products and their dangers and to quantify an increase or decrease in quiz scores after participating in Session 4 of the CATCH My Breath program. The quantitative data set provided descriptive statistics for determining percentage increase (or decrease) in participants’ baseline score for the Session 4 quiz and the comparison of aggregate mean scores for each test item using a pre-then-post design following educational interventions.

The post-program student survey was provided directly from the CATCH Foundation and is used for Outcomes 6. For Outcome 6, the goals for analysis of the post-program student survey data were to gather feedback directly from student participants regarding their perception of knowledge gained from participating in the CMB program. The qualitative data provided valuable insight into the perspectives and needs of the program participants which could guide the future implementation of the CATCH My Breath program.

The post-program teacher survey is provided directly from the CATCH Foundation and is used for Outcome 7. For Outcome 7, the goals for analysis of the post-program teacher survey data were to gather feedback directly from Student Success Coaches regarding the design and structure of the CATCH My Breath program and to quantify the level of satisfaction with the CATCH My Breath program as presented to the Summer Challenge participants. The qualitative
data provided valuable insight into the perspectives and needs of the program facilitators which could guide the future implementation of the CATCH My Breath program. A list was to be created of the written responses and the frequency in which each response occurs. For quantitative data, descriptive statistics were to be used to measure the rates of facilitator satisfaction and confidence with the CATCH My Breath program.

For Outcome 8 the goal for analysis of these data collected via an audit sheet was to track the number of SSCs trained as CATCH My Breath program facilitators. For quantitative data, descriptive statistics were to be used for determining nominal count and percentage of SSCs trained as facilitators.

Ethical Considerations

Ethical Considerations and Protection of Participants

Ethical issues were considered in the design, implementation, evaluation, and dissemination phases of this Scholarly Project. Important ethical considerations include ensuring confidentiality of the participants and facilitators, and ensuring they were well informed of the program and processes (Sanjari, Bahramnezhad, Fomani, Shoghi, & Cheraghi, 2014). The DNP student ensured the Institutional Review Board (IRB) approved all aspects of the Scholarly Project and maintained compliance with IRB guidance and determination, as required by Boise State University.

When working with students, of primary concern is safety. The DNP student agreed to undergo the same background clearance process that is required for any incoming TTLM volunteer who works with students. The DNP student has completed CITI training (Appendix F) which reviews ethics and compliance considerations when working with human subjects. Additionally, this project was submitted to the Boise State University Institutional Review Board
for approval and oversight. All interactions with the Summer Challenge students were proctored by TTLM staff, and all planning and activities related to the project interventions were reviewed and approved by TTLM administrators prior to implementation.

The data gathered by the DNP student in the form of session quizzes did not include any personal information, including the name, of any student participant. Additionally, data gathered from the student pre-and-post program survey, as well as the teacher post-program survey was collected electronically on a computer via a Survey Monkey created and managed by the CATCH Foundation program liaison. The DNP student did not have direct access to these data. Once the Survey Monkey tools are completed the CATCH Foundation program liaison receives, aggregates, and deidentifies the data prior to returning it in Excel form to the DNP student. These measures helped protect the privacy and confidentiality of the student participants and the TTLM staff.

Conflicts of Interests

The DNP student’s husband worked for True to Life Ministries as a Student Success Coach from 2017-2019. He was not affiliated with TTLM during the planning and implementations periods, nor was he affiliated with TTLM during the analysis and dissemination phases of this Scholarly Project. While no financial support was provided to, or from, True to Life Ministries for the implementation of the CATCH My Breath electronic cigarette youth prevention program, in-kind donations in the forms of space, equipment, and student success coach’s time have been provided by TTLM. The CATCH My Breath curriculum was provided free of charge to the DNP student for implementation at TTLM’s Summer Challenge. There were no additional potential conflicts of interest to disclose.

Biases and Special Considerations
Potential biases in the design of this Scholarly Project include: TTLM leadership understands the impact and value of the program for the Summer Challenge Students; students in the local Brazosport Community lack knowledge and tools to help prevent them from using electronic cigarettes; the CATCH My Breath curriculum is effective when implemented as designed; TTLM is supportive in continuing to offer the CMB program to future cohorts of Summer Challenge. Kellogg’s Logic Model Development Guide (2004) recommends the identification of assumptions of how and why change strategies are believed to work in the community. The assumptions listed above generally impact the Scholarly Project in a supportive, positive manner.

A significant bias identified includes the assumption that Brazosport Area teens desire to live a smoke-free/vape-free lifestyle where they have the power to control their desires and behaviors, if provided with the appropriate tools and resources. The DNP student needed to ensure the goals of TTLM’s Summer Challenge program were honored and met during the planning and implementation phases of this Scholarly Project. Prioritizing the goals and mission of TTLM ensured the DNP student kept the needs of TTLM and the students they serve at the forefront during the design and implementation phases, instead of prioritizing the needs and desires of the DNP student. Staying connected to the TTLM leadership team and local teens helped guard against faulty assumptions. The CMB program was designed to give students both knowledge and skills to ensure they have the tools they need to decline e-cigarettes when offered or to begin to take steps to stop using e-cigarettes. The continuation of offering the CMB program to future Summer Challenge cohorts was discussed with the TTLM leadership team and Student Success Coaches to ensure alignment and support.
One final, and important, vulnerability for this Scholarly Project occurred in the data collection phase. Failure to consider key contextual factors that could affect the outcome of the program needed to be avoided (Newcomer, 2015). Key law changes regarding electronic cigarettes were unfolding in many states, it was important to recognize these changes when the final program data were evaluated as these new laws and changes could profoundly impact the future rates and incidence of teen electronic cigarette smoking.

**Threats to Quality**

Potential risks, or threats to quality included: an inability to schedule planning time with the TTLM Student Success Coaches and the inability to secure enough time to present all 4 sessions. Contingency plans to mitigate these risks included: requesting a feasibility planning meeting with the TTLM leadership team and Student Success Coaches during Summer 2019 to ensure risks were addressed early and ideas were brainstormed to secure enough time to present all sessions to Summer Challenge students in Summer 2020. The sessions could have been consolidated into longer sessions over fewer days or shorter sessions over more days, if needed. These risks could have potentially impacted the project timeline: delaying connection with the TTLM team to begin to plan could have allowed less time to address problems or concerns and could have impacted the overall success of the project. To address this risk the project timeline could have been lengthened or shortened depending on the availability of the Summer Challenge students and program design for Summer 2020.

**IRB Application and Project Determination**

All program plans, tools, and details were reviewed by Boise State University Institutional Review Board. This project was granted Exempt Status from the Boise State IRB. An IRB letter of determination can be found in Appendix T.
Results

Contextual Elements That Interacted with The Interventions

During the Summer of 2020, the world was several months into a global pandemic with many local and national businesses just beginning to open their doors again to the public. Beginning in April 2020, discussions began regarding True to Life Ministries (TTLM) holding their two previously planned Summer Challenge sessions. By the beginning of May, it was clear the June cohort would need to be cancelled. At this point, planning began on the feasibility of holding the second cohort of Summer Challenge in July. By early June the constraints were too high and TTLM made the tough decision to cancel the second session of Summer Challenge. By late June TTLM made the difficult decision to layoff all but one of the student success coaches.

Even with these constraints, an intense desire existed within TTLM to bring this needed education to local teens. Various options were explored to still be able to offer the CATCH My Breath e-cigarette prevention program (CMB) to local students. The CATCH Foundation created augmented materials for the CMB program to be offered via the online meeting platform Zoom. The Zoom platform has the ability to break students out into small groups, which creates a positive environment for in-depth discussion of the provided questions. Pros and cons of the virtual offering were considered. TTLM understood many local students have limited internet access in their homes and this would prove to be a barrier for participation.

Ultimately it was decided an in-person offering would provide the best opportunity and environment for student participation. TTLM would create a one-day educational offering for local high school students on the TTLM campus. The CATCH My Breath vaping prevention program needed to be consolidated into one single day session to be offered to the TTLM students during the one-day seminar. During this time, the greater Houston area, including the
Brazosport area, was experiencing record numbers of COVID-19 positive cases. Understanding it would be better and safer to provide the seminar sooner, rather than later, a date was chosen just two short weeks away from the initial collaboration meeting. An IRB Modification form was submitted and approved to proceed with the revised format. The revised IRB form can be found in Appendix U.

Several collaboration meetings followed in which the appropriate location for the seminar was discussed with an emphasis on the ability to safely social distance between student participants. The large classroom at True to Life Ministries was determined to be the best location to provide ample space for social distancing. The need for implementing a participant cap was discussed and it was determined a cap would not be necessary given the limited number of students expected to attend.

The creation of registration forms and social media posts was also discussed. Content, tone, and alignment with the TTLM and CATCH My Breath brand were considered as the content was created, reviewed, edited, and approved. A social media post was created by the TTLM digital team and posted to the TTLM Facebook page with a link to complete the Google Form to sign up for the seminar. A copy of the TTLM social media post can be found in Appendix V. Flyers were disseminated to local teen hangouts such as Starbucks and other local coffee shops. A copy of the flyer can be found in Appendix W. Originally, TTLM planned to distribute the flyers at local high schools through their existing Belay program. However, with classes cancelled since March, this was no longer an option. A QR code was created and placed on the flyers for interested participants to scan with their cell phone’s camera. The QR code linked directly to a Google Form created for the purposes of registering seminar attendants. Access to the Google Form was granted to TTLM staff and the DNP project student.
Each of the CMB modules required additional review and alternative activities were considered in place of the two take-home activities embedded in two of the CMB modules. It was determined both take-home activities could be turned in to discussion questions and the remaining module contents stayed the same.

Email communication was sent to the CATCH Foundation program manager requesting approval to present the CMB program to student participants in only one day, as opposed to the one module per week, or one module per day, recommended by the team. Approval and support were received from the CATCH Foundation program manager. The CATCH Foundation was pleased the information would reach students even if it was not implemented over a 4-week or 4-day period.

Under normal circumstances TTLM would provide all meals and snacks to their Summer Challenge participants. However, because Summer Challenge was not being offered, the DNP student would need to provide all snacks and lunches for the CMB seminar. Due to the COVID-19 pandemic, special considerations needed to be made for the types of food offered. Individually packed lunches were chosen along with small individual packs of snacks and single-serve drinks. Additionally, masks for student participants were provided along with multiple bottles of strategically placed hand sanitizers for frequent use by the students.

Because the full CMB program would be offered all at once during a 4-hour period, considerations for student engagement were brainstormed. The flow of the day along with the frequency of brain breaks for the students were considered. An icebreaker was created for use at the start of the seminar to introduce the students to each other, along with four additional brain break games to keep the students awake and engaged during the seminar. Each game needed to
be created with social distancing in mind. Additionally, every attempt was made to ensure the students would not be touching the same objects during the seminar or during any of the games.

A core component of the CMB program is small group activities. Understanding the importance of keeping the students socially distanced, strategic seating arrangements were created to maximize space and afford opportunities to safely participate in small group conversations. This environment allowed for maximum participation and appropriate distancing for each student.

Additional core components of the CMB program are the pre-and-post student surveys. Initially shared devices were considered for use by the students, however, due to the pandemic this was no longer an option. QR codes were created and placed on flyers which were placed on the student’s tables. This allowed each student to snap a picture of the QR code and take the surveys on their own personal devices.

Steps of the Intervention

TTLM shared the created promotion post to their Facebook page which was shared by other local community leaders, such as the Superintendent for the Brazosport Independent School District, over 40 times within the first 48 hours. The registration link was turned off 24 hours prior to the seminar to allow for the appropriate number of boxed lunches to be ordered for the students. Ultimately 10 local students signed up via the Google Form to attend the CMB seminar. These students represented the following school districts: Angleton ISD, Brazosport ISD, Danbury ISD, and one visiting student from Clark County School District (Nevada). There were 3 Seniors, 2 Juniors, 1 Sophomore, 3 Freshman, and one 8th grader. See Appendix X for Google Form Sign Up Log.
Students were greeted at the door of TTLM to welcome them to the facility, provide them with hand sanitizer and a face mask. Each student was provided a boxed lunch and drink along with instructions to scan the QR code to take the CMB pre-survey while they enjoyed their lunch. After the students completed their pre-survey and lunch they participated in an ice-breaker/introduction game (See Appendix Y for Ice Breaker and Brain Break Games).

The students were informed the CMB program included 4 modules. Prior to each module the students completed a pre-session quiz. The module content followed the pre-quiz and the students then participated in a small group activity or discussion. After each small group activity or discussion, the students completed the post-quiz for the module. After the post-quiz was completed the students were offered a short break.

Brain break games with prizes were played between each of the modules to keep the students engaged and having fun. Four total brain break games were played. Each game offered the opportunity to win prizes such as full-sized candy bars, chips, and other snacks. All games were chosen and designed to allow appropriate social distancing and no same-object touching by the students to assure their safety during the pandemic. The pre-quiz-module-group activity-post-quiz-break-brain game structure continued throughout the seminar; see Appendix Z for the flowchart for the seminar. After the students completed the final module and corresponding post-quiz, the students were provided with the instructions and QR code for the student post-survey.

Each module was presented via Google slides projected to a SmartTV set up in the TTLM classroom. The Google slides were created by the CATCH Foundation and were presented unedited or altered. The small group discussion question and activities were completed with their corresponding module, as instructed by the CMB Program.
Session 1: Designed for Addiction

The goals of this session were to understand the highly-addictive nature of nicotine, describe the health hazards associated with e-cigarette use, and to identify the health and social consequences of e-cigarette use.

The session began with a 2-minute introduction of the session. Students were informed they would learn to identify the consequences of using e-cigarettes, understand the highly-addictive nature of nicotine, learn strategies used by the tobacco industry to get teens addicted to nicotine and other products and to co-create and participate in the conversation about tobacco and e-cigarette policies. Students learned e-cigarettes contain fewer hazardous chemicals than conventional cigarettes, but that does not mean they are harmless. Students received 10 minutes of direct instruction followed by a 20-minute group work session focused on identifying social and health consequences of using e-cigarettes. After a few minutes of working each group was asked to have one student report one health consequence and one social consequence. Their responses were recorded on a whiteboard and the provided example health and social consequences were revealed on the Google Slides.

Session 2: What Could Go Wrong?

The goals of this session were to identify existing knowledge or perceptions of e-cigarettes, dispel misconceptions about e-cigarettes, synthesize information about the health and social consequences of using tobacco products such as e-cigarettes, and to discover ways to quit using tobacco products (including e-cigarettes) and support peers who want to quit by offering encouragement and referring cessation resources to them.

The session opened with an activity. If the CMB program had been offered over several weeks or several days, this session would have been a take-home interview for a peer who uses
e-cigarettes and an adult who does not. However, since the CMB program was offered only on one day, the students were asked to think of a peer they knew who was an e-cigarette user and considered what an adult who did not use e-cigarettes would tell them. Students discussed their answers in an open forum which lead to rich dialogue and sharing.

After the opening activity, direct instruction commenced. Students were reminded that almost all tobacco products contain nicotine. The health and social consequences from Session 1 were reinforced. The following facts were shared with the students: more than half of e-cigarette users aren’t aware that flavored e-liquid contains nicotine; approximately two-thirds of U.S. teenage JUUL users do not know it contains nicotine; the students are empowered to help a friend quit by sharing resources they learn about in the CMB program.

After the direct instruction time, students entered the work time for Session 2. Students were broken into their small groups and blank index cards were distributed to each student. Students were instructed to create a six-word story using their assigned topic. One of the following topics was assigned to each group: reasons why young adults their age experiment with e-cigarettes, the health consequences for using e-cigarettes, the social consequences of using e-cigarettes, describe how an e-cigarette user might feel or behave when craving nicotine, and calculate the cost of smoking one JUUL pod a day for 10 years. What could you buy with that money instead of JUUL pods? Each group was called upon to share their six-word story inspired by their assigned topic.

**Session 3: Co-Create and Hack the System**

The goals of this session were to learn about laws, rules and regulations regarding tobacco and e-cigarettes, discuss the reason behind such rules and how it applies to the youth, and to understand that they can participate actively in such policy making. Students were asked
to spend a few minutes looking up and reading about their local school district rules, state laws and education regulations on tobacco and e-cigarettes. They were asked to share what they feel are the pros and cons of the rules, laws, and codes they found and to list examples of age limit restriction on certain activities.

During the direct instruction time students were asked to list some common age limits (restrictions), then possible answers were revealed in the presentation. Index cards were distributed to each student for them to record their answers to the following questions: what are some of the laws/rules regarding tobacco and e-cigarettes? Why are there age-limits for tobacco and e-cigarettes? Students worked in their small groups to brainstorm and discuss their answers.

Work time followed the direct instruction time. Students were informed they have the ability to make new rules, improve existing rules and communicate their ideas to their local school district Wellness Committee and the Tobacco Control and Prevention Agency. Students learned hacking the system means evaluating school district and state rules that govern youth tobacco and e-cigarettes. Each student received a copy of the Tobacco & E-cigarette Law Investigation handout (Appendix AA). Students were asked to share at least one existing rule they would strengthen and how they would make it better.

**Session 4: Take Control of Your Life**

The goals of this session were to learn to create laws and rules regarding tobacco and e-cigarettes and to learn to communicate policies to governing agencies. This session began with a 4-minute video titled *Electronic Cigarettes and Vaping*. After viewing the video, students were reminded of the following key points: tobacco smoking harms nearly every organ of the body, causes many diseases, and reduces the health of smokers; quitting smoking lowers your risk for smoking-related diseases and can add years to your life; cigarette smoking is the leading cause of
preventable death in the United States; young people who smoke e-cigarettes become addicted to nicotine and eventually switch to regular cigarettes, or become dual users, with harmful consequences.

Students were then asked to assemble into their groups and then into their smaller subgroup as before. The teams reviewed their ideas from the previous session and were given the following instructions: Team One - select 2 new rules that apply to tobacco and e-cigarettes; Team Two - select 2 improved rules that apply to tobacco and e-cigarettes. Students were asked to share two selected rules from each of their teams. After the students completed their module post-quiz and their student post-survey they spent several more minutes visiting with each other and enjoying the provided snacks before leaving the TTLM office.

**Process Measures and Outcomes**

For Outcome 1, the implementation guide (Appendix K) was created in the early stages of planning, but then was no longer utilized after the many changes and iterations due to COVID-related restrictions. TTLM provided support and input into the final project plan. A Summer Challenge/CMB Timeline can be found in Appendix AC.

For Outcomes 2-5, the CATCH Foundation session quizzes (Appendices L, M, N, and O) were used prior to and just after each session. All 10 students participated and completed both the pre- and post-session quizzes. The pre- and post-session quiz scores were analyzed using descriptive statistics to evaluate student learning. Students were assigned a numbered set of quizzes (both pre and post) to take. Each set of quizzes included a quiz marked “pre-test” and the same quiz marked “post-test” for each of the four sessions. Every student received a packet containing 8 quizzes in total, each marked with their assigned number. The quizzes were graded and evaluated by student (via their assigned number) and then broken into pre- and post-session
quiz data sets. Data were reviewed individually and as an aggregate and pre-test scores were compared with post-test scores. Mean scores for each quiz as well as percentage improvement (if applicable) for each quiz were analyzed. Data sets can be found on Appendix AD.

For Outcome 6, the post-program student survey provided by the CATCH Foundation was utilized after all four sessions had been presented to the students. This survey was provided digitally to each student via the created QR code. The post-program student survey gathered feedback directly from the students, which can help guide future offerings of the CATCH My Breath Program by TTLM. 87% of post-survey participants stated they learned a lot from the CMB program. 100% of post-survey participants stated they enjoyed being a part of the CMB program. Additionally, 87% of post-survey participants agreed or strongly agreed when asked the question, “I think all middle and high school kids should go through the CATCH My Breath program.” While 10 students participated in the CMB Program, only 9 completed the student pre-survey and only 8 completed the post-survey. It is not possible to know which student did not complete their surveys, nor the reason why they failed to complete their surveys, since the surveys did not contain personal identifiers.

For Outcome 7, the post-program teacher survey was not provided to the student success coaches, since they were all laid off from TTLM because the 2020 Summer Challenge program was cancelled. The DNP student provided the CMB program teaching, since the tight timeline did not offer enough opportunity to train a core staff member of TTLM to teach the program.

For Outcome 8, the audit sheet of SSCs trained as CMB program facilitators was not utilized. Due to the layoff of all but one SSC, the difficulties and stresses surrounding the COVID-19 pandemic, and how quickly the one-day seminar was planned and implemented, the decision was made to not formally train the SSC, but instead for the DNP student to teach the
class for TTLM this summer. TTLM still desires to partner with CMB to offer the program to future Summer Challenge students. The Student Services Coordinator for TTLM was provided with contact information for the program manager at the CATCH Foundation to begin the discussions when TTLM is ready.

**Outcomes Analysis**

For Outcome 1, while the CMB curriculum, content, and design were approved and appeared to meet the needs of the TTLM Staff, the Student Success Coaches were not surveyed due to the COVID-19 pandemic layoffs.

For Outcomes 2-5, an Excel spreadsheet was created to analyze the pre and post session quizzes for each student participant. All students completed the pre and post session quizzes for all four sessions. Descriptive statistics were performed and pivot tables created and analyzed (see Appendix AD).

For Session 1, the average for the pre-quiz was 86.5%, the post-quiz average increased to 94.9% which represents a 9.71 percentage change from the pre-quiz score. 100% of the students scored 80% or better on the 6-question CMB Session 1 post-quiz; this represents an achievement of Outcome 2.

For Session 2, the pre-quiz average was 46%. The post-quiz average remained unchanged at 46%. This represented a 0% percentage change and 80% of students did not score 75% or better or increase their score by 10% from the pre-quiz score. This does not represent an achievement of Outcome 3.

For Session 3, the average for the pre-quiz was 67.5%, and the post-quiz average increased to 75%. 20% of the students scored 80% or better on the 6-question CMB Session 1 post-quiz and 30% of the students increased their pre-quiz score by greater than 10%. While this
does not represent an achievement of Outcome 4, there was an 11.1 percent improvement in the post-quiz score from the pre-quiz score.

For Session 4, the average for the pre-quiz was 83%, the post-quiz average remained at 83%, which represents a 0% percentage change from the pre-quiz score. 100% of the students scored 80% or better on the 6-question CMB Session 1 post-quiz, which represented an achievement of Outcome 5.

87.5% of the student survey participants responded “Strongly Agree, or Agree” when asked the question, “I learned a lot about e-cigarettes from the CATCH My Breath program” on the student post-program survey. This represents achievement of Outcome 6.

Because Summer Challenge was not offered, the students were unable to answer the question, “I think all Summer Challenge students should go through the CATCH My Breath program”, however, 87.5% of student survey participants responded “Strongly Agree, or Agree” when asked, “I think all middle and high school students should go through the CATCH My Breath program.” While Outcome 6 was not met, this finding does still provide valuable insight into the usefulness of the program to future students. Student engagement was high throughout the program and they repeatedly mentioned vaping is a huge problem at their school but no one seems to be talking about it.

Student Success Coaches were not available to be surveyed or taught to be program facilitators since they were unfortunately laid off from TTLM due to the COVID-19 pandemic. Therefore Outcome 8 was not measured.

**Associations Between Outcomes, Intervention(s), and Contextual Elements**

The impact of COVID-19 was palpable and evident throughout the planning and implementation phase of this project. The limited number of student participants, the cancelling
of Summer Challenge, the creation of a one-day seminar, and the elimination of TTLM’s Student Success Coaches all resulted from the impact of COVID-19. While several short-term outcomes were achieved in spite of these factors, it is plausible the program could have had a wider impact if the Summer Challenge program had been in place. Additionally, the elimination of the SSC’s from TTLM could make the sustainability of the CMB in the Summer Challenge program difficult to achieve, especially considering there are no trained CMB facilitators at TTLM currently.

In the Summer of 2019, the CMB program was updated and overhauled. While this helped to expand the program and make it more relevant to students, not all of the program materials were updated in the same fashion. The Session 2 quiz covered content was no longer included in the 2nd session. This is the likely reason the students’ pre-and-post session quizzes for Session 2 were so low. These low quiz scores were an unintended consequence of the pre-and-post quizzes not reflecting the content in the revised Session 2.

Finally, the CMB program contains two take-home interview components, which were excluded from the program and instead used as discussion questions after the revisions to the DNP Project were made. These take-home interviews could have deepened the learnings for the students. At minimum, they would have facilitated conversations with students, their friends and parents around e-cigarette use, choices, and peer pressures.

**Missing Data**

While 10 students participated in the program, only 9 students completed the student pre-program survey and only 8 completed the post-program survey. Because the surveys were done online and without identifiers, there was no way to distinguish which students participated in the surveys, and which did not.
Actual Project Revenues/Expenses

Overall expenses decreased due to the cancellation of Summer Challenge and the elimination of labor costs from student success coaches. Food costs, however were incurred; lunches, drinks, and snacks would have been offered to the students through the Summer Challenge program, but instead needed to be purchased by the DNP student. The $150 food costs incurred was matched with an in-kind donation from the DNP student. The decrease in program days created a subsequent decrease in personnel and travel costs. The total revenues were $3990 and total expenses were $3990, resulting in an operating income of $0 (Appendix AE).

Summary

Students increased their learning in two of the four sessions as demonstrated by the average scores and percentage change between the pre and post surveys. Additionally, almost all of the surveyed students stated they agreed or strongly agreed when asked if they thought all students in high school should participate in the CMB program. While there were components that needed to be modified or omitted due to COVID restrictions, which could have impacted the student’s learning and experience, students achieved the specific aim of the project which was to increase their knowledge of the dangers of using e-cigarettes. Overall, the students responded favorably to the CMB program and many outcomes were achieved even being limited to a one-day offering. Playing brain break games and providing drinks and snacks helped keep the students engaged in a day full of learning, brainstorming, and role-playing. The supportiveness of the TTLM leaders and staff and the flexibility of the DNP student were integral to the project’s overall success. The TTLM staff member who supervised the training expressed a strong desire to connect and partner with the CATCH Foundation to provide the CMB program.
along with other CATCH programs to the Brazosport Community. The TTLM team stated they received multiple interest comments from parents and teachers as a result of their social media post.

**Interpretations**

The use of the CATCH My Breath e-cigarette prevention program curriculum increased the student participant’s baseline knowledge of the effects and dangers of e-cigarette use. Students demonstrated an increase in knowledge despite receiving the entire curriculum in one day. Additionally, 87% of student post-survey respondents strongly agreed or agreed when asked the question, “I learned a lot about e-cigarettes from the CATCH My Breath program.” 87% of students survey after the program agreed or strongly agreed when asked, “The CATCH My Breath program would be effective in getting kids not to vape.” A recent study noted students who participate in tobacco prevention efforts are found to have lower tobacco use (McMenamin, et al., 2018). By equipping these student participants with knowledge and tools about e-cigarette use, they can positively impact their communities and schools by sharing their knowledge and influencing those around them not to vape. While contextual factors significantly impacted the project implementation, the content remained largely the same, which accounts for the achievement of many of the project’s desired outcomes. The significant trade-offs for the consolidated offering was the inability to participate in the take-home assignments and interviews, along with the opportunity to establish bonds and relationships with the student participants over a longer period of time. While the curriculum is still able to be utilized in a condensed, consolidated format which could encourage more local schools to adopt the CMB program and tailor the length of program offering to fit their individual needs, it is important to
note limiting the program to only one-day may not be the most effective way to present the CMB content.

**Policy Implications**

Policies have greatly impacted this project. In December of 2019, changes to federal laws increased the purchasing age for e-cigarettes from 18 to 21 years. Additionally, in early 2020, flavor pods containing nicotine were greatly limited, with gas stations and groceries stores only able to offer mint and tobacco flavored nicotine pods. These policy changes have the potential to positively impact future smoking and vaping rates among teens. However, these policy changes do not impact the lack of knowledge regarding the harmful effects of nicotine on a teen’s growing brain and body.

Texas currently does not require tobacco prevention programs for all students. The American Lung Association noted Texas earned an “F” for its 2019 efforts to reduce and prevent tobacco use (American Lung Association, 2020). This article further noted 27.5% of high school student currently use tobacco products. The American Lung Association (2020) cited a staggering 135% increase in teen tobacco use over the previous two years. We have lost the opportunity to create the first tobacco-free generation.

Policies requiring mandatory education of junior and high school students about the dangerous impact of nicotine on their health is needed now. Future policies should be enacted at the state or federal level mandating e-cigarette and tobacco prevention training and curriculum be offered in all publicly funded junior high and high schools. The Catch My Breath Program was designed to be offered to large groups of students in community or school settings and would meet this need. In lieu of state or federal mandates, local school districts should make tobacco and e-cigarette prevention and education a top priority for the upcoming school year.
The local superintendent of schools was extremely supportive of this project from the beginning and the results from this project could guide his team if they choose to offer the CMB program to their students. Community organizations, like True to Life Ministries, which service students could adopt the CMB curriculum to offer to their students. TTLM is currently considering adopting the CMB program, along with other CATCH Foundation programs, to their students through programs such as Summer Challenge. This would not require political support, as the leadership team has been supportive of this project since the beginning. The results of this project will help guide the design and structure of the future offerings.

The findings, which noted the sub-optimal outcomes associated with consolidating the 4-week program into a one-day offering, will be helpful to the school district and TTLM as they consider incorporating this program into their curriculum. Though the one-day format was not ideal for optimal learning, a program shorter than 4-weeks could prove to be very successful. The option to decrease the length of the program, while still maintaining the program’s key activities and competencies will be valuable to both the staff at the CATCH Foundation as well as local school and community program leaders.

**Limitations**

There are limitations to the interpretation of these results. First, the student population was likely not a reflection of the community student population as a whole. This is largely due to the limited time frame for student recruitment and chosen modality for recruiting students, (through TTLM’s Facebook account) as opposed to soliciting students through the local high schools. As such, none of the students stated they currently vape or had vaped in the previous 30 days. It is likely the Summer Challenge participants would have had a wider range of responses to these questions. Second, not all students participated in the student pre and post surveys. Out
of 10 students, 9 participated in the pre-survey and 8 participated in the post-survey. Additionally, one of the 8 students who participated in the post-survey completed the final half of the student choosing only “I don’t know” or “disagree” as their response. It is difficult to know if this student truly did not know and disagreed, or if they were simply tired of taking the survey due to the long day of training. Limiting the CMB program to a one-day offering without the ability to utilize and discuss the take-home exercises and do personal reflection between the modules was a significant hinderance to the overall effectiveness of the CMB program.

Conclusions

The consolidated presentation of the CMB program is incredibly useful for the CATCH Foundation and organizations who desire to implement the program but do not have 4 weeks to devote to it. Understanding the program can be delivered with slight modifications but retain its effectiveness is important to encouraging mass adoption of this needed program. However, due to the limitations created by hosting a one-day seminar I would recommend extending the program into multiple days, ideally no less than a week. This would allow sufficient time for relationship building, take-home assignment completion, and reflection time between sessions. TTLM has the ability to choose to incorporate the CMB program into future cohorts of Summer Challenge over several weeks, multiple days, or during a single week. A TTLM staff member would need to be trained as a facilitator since contextual constraints prohibited this from occurring during the project. Conversations regarding sustainability of the program are in progress. However, the landscape for TTLM in early 2021 is still uncertain. The Executive Director for TTLM would like to continue to offer the CMB program to students, but without student success coaches, he is unsure of a Summer Challenge Program will be offered in 2021. In light of the economic impact of the COVID-19 virus on businesses and the school system in
general, TTLM is unsure if they will continue to be contracted to work with students inside of BISD schools after the 2020-2021 school year. Changes to their partnership with the local school district would further affect TTLM’s ability to offer a Summer Challenge program in the future.

The implications for community and school organizations desiring to offer the e-cigarette prevention program are attractive, for reasons noted above. Studies evaluating the effectiveness of a consolidated program versus the traditional multi-week program would be useful in this area. Decreasing the amount of time and resources needed to provide this training could encourage broader acceptance of increased offerings of the CATCH My Breath program to students who desperately need the knowledge and tools it provides. An open invitation has been issued to TTLM to present findings at their leadership and board meeting. The Executive Director has stated he will keep in touch when these meetings will be possible. Additionally, the full report has been shared with the CATCH Foundation project manager. The CATCH Foundation project manager requested permission to share the final report with Dr. Steven Kelder, creator of the CATCH My Breath program, which was granted. An open invitation for a follow up call or Zoom meeting was also offered. Early planning sessions have begun for Summer Challenge 2021, which look promising for the implementation of the CATCH My Breath E-Cigarette and Vaping Prevention Program.
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A COMMUNITY-BASED E-CIGARETTE PREVENTION PROGRAM


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https://storage.googleapis.com/files.novareader.co/springerpub/d8a500e7-8bd2-7039-501a-d202-1523447005440/9780826142788/OEBPS/text/9780826142788_Chapter08.xhtml#ch8ref


**EBP Question:** In local teens (P), how does an education and awareness program about the effects of vaping (I) affect initiation or past 30-day use of e-cigarettes (O), compared to teens that do not participate in an education and awareness program (C)?

**Date:** 3.2.19

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<tr>
<th>Article #</th>
<th>Author &amp; Date</th>
<th>Evidence Type</th>
<th>Sample, Sample Size &amp; Setting</th>
<th>Study findings that help answer the EBP question</th>
<th>Limitations</th>
<th>Evidence Level &amp; Quality</th>
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<tr>
<td>2101</td>
<td>Steve Sussman David S. Black Louise A. Rohrbach 2010</td>
<td>Systematic Review of RCTs</td>
<td>Smoking prevention programs from three distinct periods to time were reviewed to demonstrate the swing from increased to decreased public confidence in prevention programs. Difficult to ascertain sample size and settings.</td>
<td>School-based smoking prevention programs are typically implemented within a larger context of community-wide and state-wide tobacco control efforts, and these endeavors may show greater effectiveness when used comprehensively. School-based programs such as social influences-oriented tobacco use prevention programming appear to work at least 60% of the time in research studies.</td>
<td>Publication is over 10 years old. Does not focus on vaping Author with speculative observations of the data, since the future of school-based prevention programs and resulting</td>
<td>Level 1 C quality</td>
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<tr>
<td>2102</td>
<td>John P. Elder, et al.</td>
<td>RCT</td>
<td>22 junior high schools in San Diego, California. 11 schools were in the intervention group, 11 were in the control group. Of the 2668</td>
<td>The most promising approaches to the prevention of tobacco use among adolescents are those that not only emphasize the social influences model but also focus on social skills training, media influences, and norm perceptions. SHOUT uses techniques common to many tobacco use prevention programs, including an emphasis on</td>
<td>public reactions are unknown. Study observed the public’s approval of smoking prevention programs, their effectiveness and elements that make them effective were not discussed in detail.</td>
<td>Level 1 A quality</td>
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Note: Evidence Type includes: Case study*, effect case study*, randomized controlled trial (RCT), etc.
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<tr>
<td>2103</td>
<td>Silvana Skara, Steve Sussman 2003</td>
<td>Quantitative Analysis</td>
<td>Students, 1174 (44%) were in the intervention group and 1494 (56%) were in the control group</td>
<td>Interpersonal behavior aimed at countering peer pressure to initiate use of cigarettes and smokeless tobacco. Also emphasized are the use of community activism, positive reinforcement for abstinence, and undergraduate facilitators. The transfer to telephone and mail contact only in the later stages of the program SHOUT's results increased consistently over 3 years of intervention. College student facilitators appear to be effective change agents, especially given both their sense of responsibility (and the fact they earn credit for the intervention) and their relative youth and ability to relate to junior high school students. An important component of the SHOUT intervention was the use of community activism and positive reinforcement for behavioral change.</td>
<td>Smokeless tobacco, however since the prevalence of smokeless tobacco use in the area of focus in San Diego were so low, there was no notable difference in the prevalence rate after the intervention, however positive results were noted for past month tobacco usage for the other use measures</td>
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<td>2201</td>
<td>Ola Jøsendal Leif Edvard Aarø Torbjørn Torsheim Jon Rasbash</td>
<td>RCT</td>
<td>A national Representative sample of 99 schools in Norway (195 classes, 4,441 students) was</td>
<td>This school-based intervention, based on a social influence approach, proved to be effective at reducing smoking rates among participants. Program design included these evidence-based features:</td>
<td>Publication is 15 years old The circumstances in Norway may</td>
<td>Level 1 A quality</td>
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**Focus Area: Components of effective school-based prevention programs**

A review of 25 long-term adolescent tobacco and other drug use prevention program evaluations

- A search of Medline, Healthstar, and PsychINFO databases.
- Intervention studies that met five core criteria were retained for review. Two authors independently abstracted data on study characteristics, methodology, and program outcomes. Search results yielded 25 studies suitable for examination.

- More in students exposed to social influences programs compared to control students.
- The program contents of all 25 studies included prevention strategies that addressed the issues of social influences to smoke and the development of skills to resist such pressures.
- This review of long-term tobacco and drug use prevention intervention studies published since 1966 indicates that school- and community-based programs were effective in preventing or reducing adolescent cigarette, alcohol, and marijuana use across follow-up periods ranging from 2 to 15 years.
<table>
<thead>
<tr>
<th>Article #</th>
<th>Author &amp; Date</th>
<th>Evidence Type</th>
<th>Sample, Sample Size &amp; Setting</th>
<th>Study findings that help answer the EBP question</th>
<th>Limitations</th>
<th>Evidence Level &amp; Quality</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>Evaluation of the school-based smoking-prevention program BE smokeFREE</td>
<td>used when the intervention started in November 1994. Schools were allocated to one of four groups: a comparison group (a) and three intervention groups (b, c, and d). Group b received the most comprehensive intervention.</td>
<td>(1) Classroom sessions should be delivered at least five times per year in two of the three years from sixth to eighth grades. (2) The program should emphasize (a) social factors that influence the onset of smoking, (b) short-term consequences of smoking, and (c) refusal skills. (3) The program should be incorporated into the existing school curriculum. (4) The program should be introduced during the transition from elementary school to junior high or middle school. (5) Students should be involved in the presentation and delivery of the program. (6) Parental involvement should be encouraged. (7) Teachers should be adequately trained. (8) The program should be socially and culturally acceptable to the local community.</td>
<td>be rather favorable for school-based tobacco interventions. Norwegian teachers are at least to some extent familiar with educational approaches that include active involvement of students. In Norway all forms of tobacco advertising are prohibited, and so is sale of tobacco to persons under 18 years of age.</td>
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</tr>
<tr>
<td>Article #</td>
<td>Author &amp; Date</td>
<td>Evidence Type</td>
<td>Sample, Sample Size &amp; Setting</td>
<td>Study findings that help answer the EBP question</td>
<td>Limitations</td>
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<tr>
<td>2202</td>
<td>Mary Ann Pentz 1999</td>
<td>Meta Analysis</td>
<td>A total of 23 individual studies and seven reviews representing over 50 studies were included.</td>
<td>Multi-component community programs that have a school program as a basis, with supportive parent, media, and community organization components, have shown the most sustained effects on tobacco use. Regardless of length, most programs include: (a) the personal skills of decision-making, goal-setting, public commitment statements to stay use-free, and appraisal of tobacco or drug use risk and consequences; and (b) the social situational skills of peer pressure resistance, correcting social normative expectations, and support seeking. Most also include identifying and counteracting media influences. Effective tobacco prevention programs focus on counteracting social influences on tobacco use, include either direct training of youth in resistance and assertiveness skills or, for policy and community organization interventions, direct or indirect (through adults) training in community activism, and are mainly theory-based, with an emphasis on three levels of theory: (a) personal (attitudes, normative expectations, and beliefs); (b) social (social or group behavior); and/or (c) environmental (communications and diffusion).</td>
<td>Publication is over 20 years old Exclusion criteria not clearly noted, no mention of limitations</td>
<td>Level 1 B quality</td>
</tr>
<tr>
<td>Article #</td>
<td>Author &amp; Date</td>
<td>Evidence Type</td>
<td>Sample, Sample Size &amp; Setting</td>
<td>Study findings that help answer the EBP question</td>
<td>Limitations</td>
<td>Evidence Level &amp; Quality</td>
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<tr>
<td>2203</td>
<td>G. La Torre G. Chiaradia G. Ricciardi 2005 School-based smoking prevention in children and adolescents: review of the scientific literature</td>
<td>Review of Meta Analysis</td>
<td>A review of 7 meta analyses using keywords: school-based, smoking prevention, children, adolescents, meta-analysis, systematic review</td>
<td>Smoking prevention programs should have the following components: sustained application, booster sessions over several years; reinforcement in the community; involvement of parents and the mass media; programming smoking prevention activities within a more comprehensive school health promotion program</td>
<td>Publication is over 14 years old. Does not focus on vaping</td>
<td>Level 1 A quality</td>
</tr>
<tr>
<td>2204</td>
<td>Maureen Dobbins Kara DeCorby Steve Manske Elena Goldblatt 2007 Effective practices for school-based tobacco use prevention</td>
<td>Meta Analysis</td>
<td>A total of 318 primary studies were included across the 12 reviews were evaluated</td>
<td>There is strong evidence that school-based tobacco use prevention programs are largely effective for most tobacco use related outcomes, at least in the short term Education sessions, peer and adult-led support groups, and media campaigns were associated with the most positive results. Interventions focusing on social norms, influences, and reinforcement were found to have the greatest impact on tobacco use which is consistent with findings reported by others Evidence from this review indicated that peers and</td>
<td>Publication is over 12 years old The lack of depth of the search strategy employed in obtaining the evidence Do not review grey literature and only</td>
<td>Level 1 A quality</td>
</tr>
<tr>
<td>Article #</td>
<td>Author &amp; Date</td>
<td>Evidence Type</td>
<td>Sample, Sample Size &amp; Setting</td>
<td>Study findings that help answer the EBP question</td>
<td>Limitations</td>
<td>Evidence Level &amp; Quality</td>
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<tr>
<td>3305</td>
<td>Xinguang Chen, Yuanjing Ren, Feng Lin, Karen MacDonell, and Yifan Jiang</td>
<td>RCT</td>
<td>Data used for this analysis were derived from the 2000–08 NSDUH. Participants 12–17 years of age were included because data on exposure to community and school-based prevention programs were found.</td>
<td>Findings of this study support the conclusion that behavioral interventions are effective in postponing smoking initiation, stopping smoking and encouraging quitting as previously reported. Community organizations are able to mobilize resources to reach adolescents after school, and to spread anti-tobacco norms through social interactions and directly target tobacco outlets.</td>
<td>results from our analysis cannot replace a randomized controlled design in which whether a subject receives the intervention is determined totally at random.</td>
<td>Level 1 B Quality</td>
</tr>
<tr>
<td>Article #</td>
<td>Author &amp; Date</td>
<td>Evidence Type</td>
<td>Sample, Sample Size &amp; Setting</td>
<td>Study findings that help answer the EBP question</td>
<td>Limitations</td>
<td>Evidence Level &amp; Quality</td>
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<td></td>
<td>Based Prevention Programs and Reductions in Cigarette Smoking among Adolescents in the United States, 2000–08</td>
<td></td>
<td>available only for participants in this age range. We selected the years from 2000 to 2008 because this period represents a time when significant changes occurred in tobacco use prevention in the United States, including sudden cuts in funding for tobacco control programs</td>
<td></td>
<td>random. Second, since the data used for this analysis are cross-sectional in nature, and an index was used as a proxy of program exposure, caution is advised when drawing any causal conclusion. Third, findings of this study suggest the utility of the PDES method to study smoking behavior using cross-sectional data, but it cannot be</td>
<td></td>
</tr>
<tr>
<td>Article #</td>
<td>Author &amp; Date</td>
<td>Evidence Type</td>
<td>Sample, Sample Size &amp; Setting</td>
<td>Study findings that help answer the EBP question</td>
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</tr>
</tbody>
</table>

*Attach a reference list with full citations of articles reviewed for this EBP question.*
Figure 1. Social Influence Theory https://socialpsychproject.weebly.com/social-influence-chart.html
### Logic Model Table

**Student:** Rosanna M. Moreno  
**Scholarly Project Title:** Community-based teen E-cigarette use prevention program

<table>
<thead>
<tr>
<th>Step 5</th>
<th>Step 3</th>
<th>Step 4</th>
<th>Step 2a</th>
<th>Step 2b</th>
<th>Step 1</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Resources/Inputs</strong></td>
<td><strong>Activities</strong></td>
<td><strong>Outputs</strong></td>
<td><strong>Outcomes: Short term</strong></td>
<td><strong>Outcomes: Intermediate</strong></td>
<td><strong>Outcomes: Long term</strong></td>
</tr>
<tr>
<td><strong>What we invest:</strong> resources and contributions</td>
<td><strong>What we do</strong></td>
<td><strong>What we accomplish or produce from the activities</strong></td>
<td><strong>Who we reach with our activities</strong></td>
<td><strong>The expected changes attainable during the DNP Scholarly Project timeline.</strong></td>
<td><strong>The expected changes attainable 6 months - 2 years after the DNP Project is implemented.</strong></td>
</tr>
<tr>
<td>The human, financial, organizational, and community resources available to direct toward the project activities.</td>
<td>The processes, tools, events, technology, and actions that are intended to bring about changes</td>
<td>Direct products and services generated from program activities</td>
<td>Intended targets of the program services and activities</td>
<td>Specific changes in program. SMART. <strong>Label as Process Outcome (PO) or Change Outcome (CO)</strong></td>
<td>Specific changes in program. SMART. <strong>Label as Process Outcome (PO) or Change Outcome (CO)</strong></td>
</tr>
<tr>
<td><strong>Meeting time with TTLM Executive Director</strong></td>
<td>Seek Partnership with True to Life Ministries (TTLM) Executive Director</td>
<td>Agreement and support to partner with TTLM and present CATCH My Breath E-cigarette prevention sessions to Summer Challenge Students Summer 2020</td>
<td>TTLM Executive Director</td>
<td>1: The Catch My Breath (CMB) curriculum, content, and design are developed and approved to meet the needs of Summer Challenge students at TTLM by March 2020. (PO)</td>
<td>9: 80% of the TTLM Student Services Coordinators answer “Agree” or “Strongly Agree” when asked if the CMB curriculum, content, and design met the needs of TTLM’s Summer Challenge students 6 months after program completion.</td>
</tr>
<tr>
<td><strong>Access to TTLM Student Services Director and Student Success Coaches</strong></td>
<td>Determine stakeholders</td>
<td>Create supportive relationship with TTLM Student</td>
<td>TTLM Student Success Coaches and others</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Meeting space and time</td>
<td>Presentation equipment</td>
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<tr>
<td>Form planning committee</td>
<td>Implement plan for curriculum presentation to 2020 Summer Challenge students</td>
<td></td>
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<tr>
<td>Hold quarterly planning meetings</td>
<td>Approval to use curriculum outside of a school-based environment</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Contact information for Catch My Breath representative</th>
</tr>
</thead>
<tbody>
<tr>
<td>Discuss project with CATCH my Breath representative</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Meeting time with Catch my Breath representative</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seek permission to use materials</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Approval and access to Catch My Breath curriculum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Access and evaluate sessions Modify sessions if needed</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Time and access to computer</th>
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<tbody>
<tr>
<td>Review education sessions</td>
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</table>

<table>
<thead>
<tr>
<th>Success Coaches and identify additional team members needed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Approval to use materials</td>
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</table>

<table>
<thead>
<tr>
<th>Student Success Coaches and Student Services Director at TTLM</th>
</tr>
</thead>
<tbody>
<tr>
<td>CATCH My Breath representative</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>DNP student TTLM Summer Success Coaches, TTLM Summer Challenge students</th>
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<tbody>
<tr>
<td>DNP student</td>
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</tbody>
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<table>
<thead>
<tr>
<th>Plan and finalize dates with planning committee</th>
</tr>
</thead>
<tbody>
<tr>
<td>Final dates and plan for implementation and final</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>DNP student</th>
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<tbody>
<tr>
<td>DNP student</td>
</tr>
<tr>
<td>Meeting space and time</td>
</tr>
<tr>
<td>------------------------</td>
</tr>
<tr>
<td>Present sessions to Summer Challenge students</td>
</tr>
<tr>
<td>Student knowledge and skill gain/skill improvement</td>
</tr>
<tr>
<td>Summer Challenge students</td>
</tr>
<tr>
<td>2: After completing CMB Session 1, 80% of Summer Challenge students in both cohort 1 and cohort 2 will score a grade of 75% or better on the 6 question CMB High School session 1 quiz, or increase their score by 10% when compared to the same quiz administered before Session 1 is presented. (CO)</td>
</tr>
</tbody>
</table>
## A Community-Based E-Cigarette Prevention Program

<table>
<thead>
<tr>
<th>Presentation equipment</th>
<th>Handouts</th>
<th>Access to Catch My Breath pre and post survey</th>
<th>Time and access to computer</th>
<th>Access to Catch My Breath quiz</th>
<th>Presentation equipment</th>
<th>Handouts</th>
<th>Meeting space and time</th>
<th>Presentation equipment</th>
<th>Handouts</th>
<th>Meeting space and time</th>
<th>Presentation equipment</th>
<th>Handouts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administer CMB pre and post-program student survey</td>
<td>Final survey tool</td>
<td>Summer Challenge students</td>
<td>Student knowledge and skill gain/skill improvement</td>
<td>Student development and practice</td>
<td>Summer Challenge students</td>
<td>Student knowledge and skill gain/skill improvement</td>
<td>Summer Challenge students</td>
<td>Student knowledge and skill gain/skill improvement</td>
<td>Summer Challenge students</td>
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<tr>
<td>Evaluate quiz results after each session</td>
<td>Outcome data</td>
<td>Summer Challenge students</td>
<td>Skill development and practice</td>
<td>Summer Challenge students</td>
<td>Summer Challenge students</td>
<td>Summer Challenge students</td>
<td>Summer Challenge students</td>
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<td></td>
<td>Outcome analysis</td>
<td>DNP student Summer Challenge students</td>
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<tr>
<td><strong>5:</strong> After completing CMB Session 4, 80% of Summer Challenge students in both cohort 1 and cohort 2 will score a grade of 75% or better on the 4 question CMB High School session 4 quiz, or increase their score by 10% when compared to the same quiz administered before Session 3 is presented. (CO)</td>
<td><strong>13:</strong> Summer Challenge students continue to develop skills to resist peer pressure to use E-cigarettes. This will be demonstrated by students identifying at least 2 reasons they choose not to use e-cigarettes or 2 reasons to stop using e-cigarettes on a phone or email interview 6 months after program completion. (CO)</td>
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<td>and cohort 2 will score a grade of 75% or better on the 4 question CMB High School session 3 quiz, or increase their score by 10% when compared to the same quiz administered before Session 3 is presented. (CO)</td>
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<td><strong>6:</strong> 80% of Summer Challenge students participating in cohort 1 or cohort 2 will answer “Strongly Agree” or</td>
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<td><strong>14:</strong> Summer Challenge students continue to increase their knowledge about E-cigarettes and influence peers and friends</td>
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<td><strong>14:</strong> Summer Challenge students continue to increase their knowledge about E-cigarettes and influence peers and friends</td>
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</tbody>
</table>
# A Community-Based E-Cigarette Prevention Program

<table>
<thead>
<tr>
<th>Meeting space and time</th>
<th>Train Student Success Coaches to teach and facilitate CATCH My Breath curriculum</th>
<th>Trainaded facilitators to continue to present sessions to future Summer Challenge cohorts</th>
<th>TTLM Student Success Coaches</th>
<th>“Agree” when asked the question: “I learned a lot about E-cigarettes from the CATCH My Breath program” on the CMB student post survey completed after the Session 4 CMB presentation (CO)</th>
<th>7: 80% of TTLM staff respond “Agree” or “Strongly Agree” when asked “I think all Summer Challenge students should go through the CATCH My Breath program” in a post-program implementation feedback survey administered within 10 days after the first and again after the second Summer Challenge 2020 cohorts have completed the program.</th>
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<tbody>
<tr>
<td>Presentation equipment</td>
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<tr>
<td>Handouts</td>
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<tr>
<td>Time and access to computer</td>
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</table>

Outcome data

- Administer CMB pre and post student surveys before and after each Summer Challenge cohort
- Evaluate survey results after each cohort

Outcome analysis

- Summer Challenge students
- DNP student Summer Challenge students

- “Agree” when asked the question: “I learned a lot about E-cigarettes from the CATCH My Breath program” on the CMB student post survey completed after the Session 4 CMB presentation (CO)

- 7: 80% of TTLM staff respond “Agree” or “Strongly Agree” when asked “I think all Summer Challenge students should go through the CATCH My Breath program” in a post-program implementation feedback survey administered within 10 days after the first and again after the second Summer Challenge 2020 cohorts have completed the program.

- 8: 100% of Student Success Coaches at True to Life Ministries are taught by the Program Manager in a Train the Trainer session to be facilitators of the CATCH My Breath E-cigarette prevention program by August 20, 2020 (PO)

- 15: CATCH My Breath E-cigarette prevention program continues to be taught by Student Success Coaches to future Summer Challenge participants beginning in Summer 2021 (PO)

- 18: CATCH My Breath E-cigarette prevention program is taught by local teachers in district high schools and intermediate schools 3 years post program delivery (PO)

### Appendix D

**Timeline**

#### Project: Community-based Teen E-cigarette Use Prevention Pilot Program

<table>
<thead>
<tr>
<th>Activity</th>
<th>Month/Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Literature review, Problem Statement</td>
<td>11/2018</td>
</tr>
<tr>
<td>Organizational Assessment, SWOT Analysis</td>
<td>12/2018</td>
</tr>
<tr>
<td>Proposal Draft</td>
<td>01/2019</td>
</tr>
<tr>
<td>Timeline</td>
<td>02/2019</td>
</tr>
<tr>
<td>Logic Model</td>
<td>03/2019</td>
</tr>
<tr>
<td>CITI Training</td>
<td>04/2019</td>
</tr>
<tr>
<td>PLANNING</td>
<td>05/2019</td>
</tr>
<tr>
<td>IMPLEMENTATION</td>
<td>06/2019</td>
</tr>
<tr>
<td>Seek partnership with Executive Leadership at True to Life Ministries (TTLM)</td>
<td>07/2019</td>
</tr>
<tr>
<td>Determine key stakeholders</td>
<td>08/2019</td>
</tr>
<tr>
<td>TTLM Executive Director to connect DNP student with Student Services Director</td>
<td>09/2019</td>
</tr>
<tr>
<td>Student Services Director to connect DNP student with Student Success Coaches</td>
<td>10/2019</td>
</tr>
<tr>
<td>DNP student to email CATCH my breath organization for permission to use E-cigarette prevention education for high school students</td>
<td>11/2019</td>
</tr>
<tr>
<td>Task Description</td>
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<tr>
<td>DNP student to schedule and host quarterly planning meetings</td>
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<tr>
<td>Student Success Coaches to provide insight and feedback to DNP student regarding the proposed Scholarly Project and timelines</td>
<td></td>
</tr>
<tr>
<td>DNP student to present overview of curriculum for feedback from SSC</td>
<td></td>
</tr>
<tr>
<td>Planning committee to review timeline for implementation and best fit for Summer Challenge curriculum and activities</td>
<td></td>
</tr>
<tr>
<td>DNP student to present full curriculum to SSCs to prepare them to teach the sessions for future Summer Challenge cohorts</td>
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<tr>
<td>DNP student to meet with planning committee to review feedback from cohort #1 and make any recommended edits to curriculum prior to cohort #2</td>
<td></td>
</tr>
<tr>
<td>DNP student to finalize edited curriculum and present changes to planning committee</td>
<td></td>
</tr>
<tr>
<td>DNP student present completed sessions to Summer Challenge cohort #1 students as planned</td>
<td></td>
</tr>
</tbody>
</table>
### DATA COLLECTION

- DNP student to present curriculum to Summer Challenge cohort #2
- DNP student to create survey tool and present to planning committee for feedback
- DNP student and SSCs to ensure cohort #1 students complete evaluation
- DNP student and SSCs to ensure cohort #2 students complete evaluation

### DATA ANALYSIS

- DNP student to review data with planning committee and faculty mentor
- DNP student to present data analysis and recommendations for future cohorts to planning committee and faculty mentor

### DISSEMINATION

- Provide TTLM Executive Leadership with results
- Final Report
## Appendix E

### Outcomes Evaluation Table

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Data Collection Instrument / Data</th>
<th>Analysis Goal</th>
<th>Analytic Technique</th>
</tr>
</thead>
<tbody>
<tr>
<td>1: The Catch My Breath (CMB) curriculum, content, and design are developed and approved to meet the needs of Summer Challenge students at TTLM by March 2020. (PO)</td>
<td><strong>Instrument:</strong> The program implementation tool provided by the CATCH Foundation will be completed by the program manager with input from the stakeholder team at TTLM. <strong>Data:</strong> The program implementation guide reviews the program content and plans for the program’s 4 session implementation session during the Summer Challenge program.</td>
<td>1. To gather feedback directly from program facilitators regarding the design and structure of the CATCH My Breath program 2. To quantify the level of satisfaction with the CATCH My Breath program as presented to the Summer Challenge participants</td>
<td>The QUALITATIVE data provides valuable insight into the perspectives and needs of the program facilitators which guides the future implementation of the CATCH My Breath program.</td>
</tr>
<tr>
<td>2. After completing CMB Session 1, 80% of Summer Challenge students in both cohort 1 and cohort 2 will score a grade of 75% or better on the 5 question CMB High School Session 1 quiz, or increase their score by 10% when compared to the same quiz administered prior to participating in Session 1</td>
<td><strong>Instrument:</strong> The Session 1 quiz provided by the CATCH foundation is a 5-question assessment which includes 4 True/False questions and 1 multiple choice question. <strong>Data:</strong> The Session 1 quiz assesses student participant’s knowledge of nicotine, its impact on the body, and its presence in popular brands of electronic cigarette devices. This quiz will be administered to the student participants before and after participating in Session 1 of the CATCH My Breath program.</td>
<td>1. To assess baseline knowledge of nicotine in electronic cigarettes. 2. To quantify an increase or decrease in quiz scores after participating in Session 1 of the CATCH My Breath program.</td>
<td>The QUANTITATIVE data set provides descriptive statistics for determining percentage increase (or decrease) in participants’ baseline score for the Session 1 quiz. Additionally, comparison of aggregate mean scores for each test item using a pre-then-post design following educational interventions. Measurements and feedback from Cohort 1 will inform program modifications for</td>
</tr>
</tbody>
</table>
3: After completing CMB Session 2, 80% of Summer Challenge students in both cohort 1 and cohort 2 will score a grade of 75% or better on the 4 question CMB High School Session 2 quiz, or increase their score by 10% when compared to the same quiz administered before Session 2 is presented (CO)

**Instrument:** The Session 2 quiz provided by the CATCH foundation is a 5-question assessment which includes 3 True/False questions and 2 multiple choice questions.

**Data:** The Session 2 quiz assesses student participant’s knowledge of nicotine, its impact on the body, and social consequences of using e-cigarettes. This quiz will be administered to the student participants before and after participating in Session 2 of the CATCH My Breath program.

1. To assess baseline knowledge of nicotine in electronic cigarettes and their social consequences.
2. To quantify an increase or decrease in quiz scores after participating in Session 2 of the CATCH My Breath program.

The QUANTITATIVE data set provides descriptive statistics for determining percentage increase (or decrease) in participants’ baseline score for the Session 2 quiz.

A comparison of the mean aggregated score for the pre-and-post test for each question will be calculated to better understand student participant’s knowledge gain and inform revisions and additions to the CATCH My Breath program.

4: After completing CMB Session 3, 80% of Summer Challenge students in both cohort 1 and cohort 2 will score a grade of 75% or better on the 4 question CMB High School Session 3 quiz, or increase their score by 10% when compared to the same quiz administered before Session 3 is presented. (CO)

**Instrument:** The Session 3 quiz provided by the CATCH foundation is a 5-question assessment which includes 3 True/False questions and 2 multiple choice questions.

**Data:** The Session 3 quiz assesses student participant’s knowledge of legal age limits for e-cigarettes, marketing laws, and advertising tactics of e-cigarette companies. This quiz will be administered to the student participants before and after participating in Session 3 of the CATCH My Breath program.

1. To assess baseline knowledge of age limits for e-cigarettes, marketing techniques, and manipulative strategies used by big tobacco companies.
2. To quantify an increase or decrease in quiz scores after participating in Session 3 of the CATCH My Breath program.

The QUANTITATIVE data set provides descriptive statistics for determining percentage increase (or decrease) in participants’ baseline score for the Session 3 quiz.

A comparison of the mean aggregated score for the pre-and-post test for each question will be calculated to better understand student
<table>
<thead>
<tr>
<th>5: When participating in CMB Session 4, each Summer Challenge student will develop, practice and demonstrate refusal skills and smart exit strategies by participating in a smart exit strategy small group role play game and identifying one unique response to a pretend offer of an E-cigarette. (CO)</th>
<th><strong>Instrument</strong>: The Session 4 quiz provided by the CATCH foundation is a 6-question assessment which includes 2 True/False questions and 2 multiple choice questions, and 2 free answer questions. <strong>Data</strong>: The Session 4 quiz assesses student participant’s knowledge of the appeal of flavored nicotine products, the dangers of nicotine liquid, reinforces exit strategies and clarifies the student’s choice to be e-cigarette free. This quiz will be administered to the student participants before and after participating in Session 4 of the CATCH My Breath program.</th>
<th>1. To assess baseline knowledge of the impact of flavoring nicotine products and their dangers. 2. To quantify an increase or decrease in quiz scores after participating in Session 4 of the CATCH My Breath program.</th>
<th>CATCH My Breath program.</th>
<th>The QUANTITATIVE data set provides descriptive statistics for determining percentage increase (or decrease) in participants’ baseline score for the Session 4 quiz. A comparison of the mean aggregated score for the pre- and post-test for each question will be calculated to better understand student participant’s knowledge gain and inform revisions and additions to the CATCH My Breath program.</th>
</tr>
</thead>
<tbody>
<tr>
<td>6: 80% of Summer Challenge students participating in cohort 1 or cohort 2 will answer “Strongly Agree” or “Agree” when asked the question: “I learned a lot about E-cigarettes from the CATCH My Breath program” on the CMB student post survey completed 1 week after the</td>
<td><strong>Instrument</strong>: The post-program student feedback survey is a 48-question tool that gathers information from student participants of the CATCH My Breath program. Questions are presented as multiple choice and Likert scale. <strong>Data</strong>: The post-program student feedback survey provided by the CATCH Foundation solicits feedback from students and assesses knowledge gained from the program, asks about their current and past 30-day e-cigarette use, their likelihood to vape</td>
<td>1. To gather feedback directly from program participants of the CATCH My Breath program. 2. To assess knowledge gained through participation of the CATCH My Breath program.</td>
<td>The QUANTITATIVE data set provides descriptive statistics for determining percentage increase (or decrease) in participants’ baseline score from the pre-program student survey. A comparison of the mean aggregated score for the pre- and post-test for each question will be calculated to better understand student participant’s knowledge gain and inform revisions and additions to the CATCH My Breath program.</td>
<td></td>
</tr>
</tbody>
</table>
### Session 4 CMB presentation (CO)

In the future, assesses their attitudes and beliefs about vaping and the CATCH My Breath program.

**Instrument:** The post-program feedback survey is an 18-question tool provided by the CATCH Foundation that gathers information from teachers or facilitators of the CATCH My Breath program. Questions are presented as multiple choice and Likert scale. Additionally, there are multiple opportunities to provide written comments as feedback.

**Data:** The post-program feedback survey solicits feedback from program facilitators regarding the length and structure of the sessions, the confidence level of the facilitator, the number of sessions the facilitator used to present the program, the students’ level of engagement, as well as other feedback and comments the facilitator wishes to provide.

1. To gather feedback directly from program facilitators regarding the design and structure of the CATCH My Breath program
2. To quantify the level of satisfaction with the CATCH My Breath program as presented to the Summer Challenge participants

### 7. 80% of TTLM staff respond “Agree” or “Strongly Agree” when asked “I think all Summer Challenge students should go through the CATCH My Breath program” in a post-program implementation feedback survey administered within 10 days after the first and again after the second Summer Challenge 2020 cohorts have completed the program.

The QUALITATIVE data provides valuable insight into the perspectives and needs of the program facilitators which guides the future implementation of the CATCH My Breath program. A list will be created of the written responses and the frequency in which each response occurs.

For QUANTITATIVE data, descriptive statistics will be used to measure the rates of facilitator satisfaction and confidence with the CATCH My Breath program.

Measurements and feedback from Cohort 1 will inform program modifications for Cohort 2 prior to program implementation.
| 8: 100% of Student Success Coaches at True to Life Ministries are taught by the Program Manager in a Train the Trainer session to be facilitators of the CATCH My Breath E-cigarette prevention program by August 20, 2020 (PO) |

**Instrument:** An audit sheet will be created that contains the following items:
- Student Success Coach (SSC) name
- Date the SSC was trained

**Data:** This audit sheet will track all SSC training to ensure 100% of the TTLM SSCs are trained as facilitators of the CATCH My Breath program.

| 1. To track the number of SSCs trained as CATCH My Breath program facilitators. |

For **QUANTITATIVE data**, descriptive statistics will be used for determining nominal count and percentage of SSCs trained as facilitators.
Appendix F

CITI Training Certificate
Appendix G
Memorandum of Understanding (MOU)

Memorandum of Understanding

Between

Rosanna Moreno, Doctor of Nursing Practice (DNP) student
Boise State University

and

True to Life Ministries

This Memorandum of Understanding (MOU) outlines the terms and understanding between Rosanna Moreno, a DNP student at Boise State University, and True to Life Ministries, to present the CATCH My Breath e-cigarette prevention program to the Summer Challenge students during Summer, 2020.

Background

The use of electronic cigarettes (e-cigarettes) has skyrocketed since their introduction to the US market in 2007 (Campbell-Heider & Snow, 2016). E-cigarettes have risen so sharply in popularity that they are now the most commonly used tobacco product among youth in the United States (U.S. Department of Health and Human Services, 2016). The National Youth Tobacco Survey showed a 78% increase in the teen use of e-cigarettes from 2017 to 2018 (Cullen et al., 2018).

Purpose

CATCH My Breath is an e-cigarette and JUUL prevention program created by the CATCH organization, which provides educational curriculum and training activities to equip students with the knowledge and skills they need to resist peer pressure and social media influences ("Program Overview," 2019). This pilot was aimed at equipping these teens with knowledge about the dangers of vaping as well as a core set of skills to use when confronted with a request to smoke, or vape, from a peer through the use of the CATCH My Breath E-cigarette Prevention Program. In addition, this pilot program focused on training the student success coaches at True to Life Ministries to be program facilitators of the CATCH My Breath E-cigarette Prevention Program to continue to provide this program to future cohorts of Summer Challenge students.

Intended Project Outcomes
- Students will resist their own curiosity, peer and advertising pressure to experiment with e-cigarettes
- Students will understand that e-cigarettes are addictive, unhealthy, and not as popular as they think
- Students will influence friends and peers not to use e-cigarettes
- The CATCH My Breath program design and implementation will meet the needs of TTLM’s Summer Challenge students and TTLM Student Success Coaches
- TTLM Student Success Coaches will be trained as CATCH My Breath program facilitators
- Summer Challenge students delay e-cigarette initiation, or continuation of their rate e-cigarettes after participation
- The CATCH My Breath program is adopted as regular curriculum for the Summer Challenge program

Program Structure

Duration
The CATCH My Breath program will be implemented during the Summer Challenge 2020 Cohorts 1 and 2 with planning sessions beginning in April, implementation occurring in June, July, and August, and post implementation continuing through May 2021.

Reporting
The DNP Scholarly Project will include a final report, an abstract, an oral presentation of the report and potential publication. This final report will be presented to True to Life Ministries stakeholders in the Spring of 2021. Additionally, the DNP student will submit a Final Project Report for publication in ScholarWorks. ScholarWorks is a collection of services designed to capture and showcase all scholarly output by the Boise State University community, including doctoral dissertations and doctoral project reports.

No personal identifiers will be included and all data will be reported in aggregate form. The author welcomes any comments or suggestions from True to Life Ministries, but reserves the right to publish findings and analysis according to professional standards and principles of academic freedom. For any work of a scholarly nature, the author agrees to follow the organization(s) preferences in how it is to be named (or not) in the work.

Complete this section by adding the information below, after conversation with the organizational liaison/representative:
Agency preferences for how they are named/referred to within the student’s work: by organizational name or solely by general type of agency within a region?

True to Life Ministries and TTLM.

In the student’s Final Report?
In an abstract?
In professional presentations?
In professional publications?
Any restrictions in the discussion of project details?

Student Contact Information

Rosana Moreno
Boise State University DNP Student
(DNP Student signature) Date: 2/12/2020
(Student Name), Boise State University DNP student

Date: 2/12/2020

Leslie Carter
Executive Director, TMA

(Contact Name, Organizational Position, Organization name)
# Appendix H
## Year 1 Project Expense Report

<table>
<thead>
<tr>
<th>Expense Category</th>
<th>Expense Description</th>
<th>Explanation of Expense</th>
<th>Type of Cost (variable/fixed)</th>
<th>Volume</th>
<th>Cost per Unit</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personnel</td>
<td>DNP student</td>
<td>4 full work days plus 8 additional hours or meetings and preparation</td>
<td>variable</td>
<td>40 hrs X 1 PM=40 hrs</td>
<td>$62/hr</td>
<td>$2,480.00</td>
</tr>
<tr>
<td>Personnel</td>
<td>Student Success Coach</td>
<td>4 one hour sessions; 6 hours meetings and preparation</td>
<td>Variable</td>
<td>10 hrs X 2 SSC</td>
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<td>$360.00</td>
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<tr>
<td>Material &amp; Supplies</td>
<td>Paper</td>
<td>10 educational packets, 10 pre &amp; post surveys, 5 unit flyers</td>
<td>fixed</td>
<td>1 ream of paper</td>
<td>$15/ream</td>
<td>$15.00</td>
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<tr>
<td>Space</td>
<td>TTLM Space Use</td>
<td>TTLM Multimedia Room</td>
<td>fixed</td>
<td>Use of space x 4 sessions</td>
<td>$100/session</td>
<td>$400.00</td>
</tr>
<tr>
<td>Equipment</td>
<td>Computer and presentation equipment</td>
<td>TTLM Multimedia Equipment</td>
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<td>Use of equipment x 4 sessions</td>
<td>$30/session</td>
<td>$120.00</td>
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<tr>
<td>Travel</td>
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<td>variable</td>
<td>20 miles x 12 trips = 240 miles</td>
<td>$.54/mile</td>
<td>$130.00</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Grand Total</td>
</tr>
</tbody>
</table>
Appendix I
2-3 Year Budget

<table>
<thead>
<tr>
<th>Yearly Totals:</th>
<th>$ 5,489.00</th>
<th>$ 2,168.15</th>
<th>$ 2,233.19</th>
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<tbody>
<tr>
<td>Expense Category</td>
<td>Year 1</td>
<td>Year 2</td>
<td>Year 3</td>
</tr>
<tr>
<td>Personnel</td>
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<td>$ 1,483.20</td>
<td>$ 1,527.70</td>
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<tr>
<td>Material &amp; Supplies</td>
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<td>$ 15.45</td>
<td>$ 15.91</td>
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<tr>
<td>Space</td>
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<td>$ 412.00</td>
<td>$ 424.36</td>
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<tr>
<td>Equipment</td>
<td>$ 120.00</td>
<td>$ 123.60</td>
<td>$ 127.31</td>
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<tr>
<td>Travel</td>
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<td>$ 133.90</td>
<td>$ 137.92</td>
</tr>
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</table>
Appendix J  
Statement of Operations

### Statement of Operations: Year 1

<table>
<thead>
<tr>
<th>Source</th>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Revenue Total</strong></td>
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<td>$ 5,489.00</td>
</tr>
<tr>
<td>In-Kind Personnel</td>
<td>Donation</td>
<td>$ 4,824.00</td>
</tr>
<tr>
<td>In-Kind Materials &amp; Supplies</td>
<td>Donation</td>
<td>$ 15.00</td>
</tr>
<tr>
<td>In-Kind Space</td>
<td>Donation</td>
<td>$ 400.00</td>
</tr>
<tr>
<td>In-Kind Equipment</td>
<td>Donation</td>
<td>$ 120.00</td>
</tr>
<tr>
<td>In-Kind Travel</td>
<td>Donation</td>
<td>$ 130.00</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Expenses</th>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personnel</td>
<td></td>
<td>$ 4,824.00</td>
</tr>
<tr>
<td>Material &amp; Supplies</td>
<td></td>
<td>$ 15.00</td>
</tr>
<tr>
<td>Space</td>
<td></td>
<td>$ 400.00</td>
</tr>
<tr>
<td>Equipment</td>
<td></td>
<td>$ 120.00</td>
</tr>
<tr>
<td>Travel</td>
<td></td>
<td>$ 130.00</td>
</tr>
</tbody>
</table>
Appendix K
CATCH My Breath Program Implementation Plan

Program Implementation Plan

Teacher: 

Class and period: 

Peer group facilitator training date and time: 

Curriculum implementation dates:
  Session 1: __________________________
  Session 2: __________________________
  Session 3: __________________________
  Session 4: __________________________
Appendix L
Session 1 Quiz and Answer Key

**CATCH MY BREATH**

**Quiz: Session 1**

1. Why is it easier for a teen to get addicted to nicotine?
   a. Their hearts are still developing
   b. **Their brains are still developing**
   c. It isn’t easier for a teen to get addicted to nicotine
   d. It helps them relax

2. Which of these chemicals found in e-cigarettes is also used to preserve dead bodies?
   a. **Formaldehyde** *This chemical is a main ingredient in embalming fluid which is used to preserve dead bodies. Refer to the peer group facilitator sheet 1 for more information on formaldehyde and other chemicals present in e-cigarettes.*
   b. Nicotine
   c. Propylene glycol
   d. Flavor Chemicals

3. E-cigarette vapor is water vapor.
   a. True
   b. **False** E-cigarette vapor is an aerosol made up of ultrafine particles containing nicotine and harmful chemicals.

4. A JUUL is not an E-cigarette.
   a. True
   b. **False** A JUUL is an E-cigarette, despite what teens often think.

5. Nearly all E-cigarettes, including JUUL, contain nicotine.
   a. **True**
   b. False

6. Which of the following is a part of an e-cigarette?
   a. LED Light
   b. Microprocessor
   c. Battery
   d. Cartridge
   e. **All of the above**
Appendix M
Session 2 Quiz and Answer Key

Quiz: Session 2

1. What percentage of high school students have vaped in the past 30 days?
   a. **10-15%** 11.7% of high school students have vaped in the last 30 days.
   b. 16-25%
   c. 26-50%
   d. 51-75%

2. What percentage of middle school students have vaped in the past 30 days?
   a. **0-5%** 3.3% of middle school students have vaped in the last 30 days.
   b. 6-15%
   c. 16-25%
   d. 26-50%

3. Nicotine slightly less addictive than which of the following substances?
   a. Alcohol
   b. **Heroin**
   c. Cocaine
   d. Caffeine

4. Addiction is a loss of control as a choice becomes a need.
   a. **True**
   b. False

5. Most teens surveyed disapprove of vaping and E-cigarettes. Why do you think that is?
   **Answers vary based off student.**
CATCH MY BREATH

Quiz: Session 3

1. List two examples for both indirect and direct advertising.
   **Indirect:**
   Social media (i.e., paying people on to make their product look cool; movies
   i.e., paying actors to use their brands in movies, magazine articles
   **Direct:**
   Billboards, TV ads, internet banner ads, radio ads, magazine ads.

2. About how much money do tobacco and e-cigarette companies spend on advertising, social media, and promotion every year?
   a. $100 million
   b. $1 billion
   c. $5 billion
   d. **$9 billion**

3. $9.325 billion is spent every year on tobacco and e-cigarette advertising.

4. How are tobacco companies able to afford to spend billions annually on advertising?
   a. Advertising is cheap for tobacco companies
   b. Tobacco companies do not spend billions of dollars on advertising annually
   c. Their customers are addicted to their products which leads to a lot of product being sold to fund advertising.
   d. None of the above.

4. Do you think you’re influenced by advertising? Why or why not?
   **Answers vary.** Note: whether students feel they’re influenced by advertising or not, influence is there.
Appendix O
Session 4 Quiz and Answer Key

**Quiz: Session 4**

1. Who are E-cigarette companies trying to appeal to with flavors like cotton candy and gummy bears?
   a. Elderly people
   b. Parents
   c. Adults
   d. Children

2. E-juice is safe for all ages.
   a. True
   b. False Nicotine liquid (e-juice) is very harmful and possibly fatal for developing fetus, babies and toddlers.

3. Most sweet, candy, and fruit flavored e-cigarettes contain nicotine.
   a. True
   b. False

4. On average, about how many calls involving e-cigarettes are made to poison control centers per month?
   a. 10
   b. 50
   c. 100
   d. 200 From 2014-2016, the average number of U.S. poison control center calls for e-cigarettes was 238 per month.

5. List the best smart refusal/exit strategies that you heard today.
   **Answers vary.**
   **Possible answers:** “no thanks I’m good”; Stand tall with non-smoking friends; suggest something else to do; give reasons for not wanting to use an e-cigarette; add some humor

6. Why are you choosing to be E-cigarette free?
   **Answers vary.**
This survey asks questions about your knowledge and experiences with E-cigarettes. Read each question carefully and pick the answer that is most true for you. This is not a test and there are no right or wrong answers. Your answers are private and will not affect your grades in any way.

**Question Title**
2. What is your birthdate?
   Birthdate:

**Question Title**
3. What is your sex?
   Female
   Male

**Question Title**
4. Are you Hispanic or Latino/a?
   No
   Yes

**Question Title**
5. What race or races do you consider yourself to be?
   American Indian or Alaska Native
   Asian
   Black or African American
   Native Hawaiian or Other Pacific Islander
   White
   More than one race

**Question Title**
6. What grade are you in?
   6th grade
   7th grade
   8th grade
   9th grade
   10th grade
   11th grade
   12th grade

*Questions 7-10 are about cigarette smoking. Questions in this section do not include E-cigarette use.*

**Question Title**
7. Have you ever smoked a cigarette, or any other kind of tobacco like a cigar or pipe, even one or two puffs?
   Yes
   No

**Question Title**
8. During the past 30 days, have you smoked a cigarette, or any other kind of tobacco?
   Yes
Question Title
9. Do any of your closest friends smoke cigarettes?
  None of them
  Some of them
  Most of them
  All of them

Question Title
10. Do your parents smoke cigarettes?
  None
  Both
  Father only
  Mother only
  I don't know

The next few questions are about E-cigarettes (including mods and vape pens) and vaping. E-cigarettes include brands such as JUUL, blu, NJOY, V2, 21st Century Smoke and others.

Vaping includes JUULing and other forms of using an E-cigarette.

Question Title
11. Have you ever vaped, even one or two puffs?
  Yes
  No

12. During the past 30 days, have you vaped?
  Yes
  No

13. During the past 30 days, on how many days did you vape?
  0 days
  1 or 2 days
  3 to 5 days
  6 to 9 days
  10 to 19 days
  20 to 29 days
  all 30 days

Question Title
14. What device did you use to vape? (select all that apply)
  JUUL
  blu
  NJOY
  V2
  Other (please specify)
Define the yes.
Probably yes
Probably not
Definitely not

**Question Title**
17. Are you curious about what it would be like to vape?
Define the yes.
Probably yes
Probably not
Definitely not

**Question Title**
18. If one of your best friends offered you a vape, would you try it?
Define the yes.
Probably yes
Probably not
Definitely not

*How much do you agree with the following statements?*

**Question Title**
19. I consider JUUL to be an E-cigarette.
Strongly Agree
Agree
Disagree
Strongly Disagree

**Question Title**
20. I would enjoy vaping.
Strongly Agree
Agree
Disagree
Strongly Disagree

**Question Title**
21. Vaping would help me to deal with problems or stress.
Strongly Agree
Agree
Disagree
Strongly Disagree

**Question Title**
22. Vaping will help me make new friends.
Strongly Agree
Agree
Disagree
Strongly Disagree

**Question Title**
23. Vaping would make me wake up and feel energized.
Strongly Agree
Agree
Disagree
Strongly Disagree

**Question Title**
24. Vaping would make it harder for me to play sports.
   Strongly Agree
   Agree
   Disagree
   Strongly Disagree

**Question Title**

   Strongly Agree
   Agree
   Disagree
   Strongly Disagree

**Question Title**

26. Most kids my age vape.
   Strongly Agree
   Agree
   Disagree
   Strongly Disagree

**Question Title**

27. Most kids in high school vape.
   Strongly Agree
   Agree
   Disagree
   Strongly Disagree

The remaining questions ask about your knowledge about E-cigarettes.

**Question Title**

28. How many high school students do you think have vaped in the past 30 days?
   0-20%
   21-40%
   41-60%
   61-80%
   81-100%
   I don't know

**Question Title**

29. Nicotine is addictive and harmful to the body.
   True
   False
   I don't know

**Question Title**

30. When you are addicted to something, you lose control.
   True
   False
   I don't know

**Question Title**

31. E-cigarette vapor contains mostly water.
   True
   False
   I don't know
Question Title
32. Most E-cigarettes, including JUUL, contain nicotine.
   True
   False
   I don’t know

Question Title
33. Most sweet, candy and fruit flavored E-cigarettes contain nicotine.
   True
   False
   I don’t know

Question Title
34. How much nicotine is in a JUUL compared to other E-cigarettes?
   More than other E-cigarettes
   About the same
   Less than other E-cigarettes
   I don’t know

Question Title
35. Which of the following is NOT a main part of E-liquid (or E-juice)?
   Water
   Flavoring chemicals
   Nicotine
   Propylene Glycol
   I don’t know

Question Title
36. It is illegal for teens under 18 to use E-cigarettes.
   True
   False
   I don’t know

Question Title
37. Direct pressure is advertising that everyone knows is paid for by the tobacco or E-cigarette industry on bill boards, magazines, television, and on the internet.
   True
   False
   I don’t know

Question Title
38. Indirect pressure is advertising that hides who paid for the advertising and often doesn’t even look like advertising.
   True
   False
   I don’t know

Question Title
39. Which of the following is NOT a smart exit strategy refusal strategy?
   Just say no!
   Stand tall with nonsmoking friends
   Put someone down for using E-cigarettes
   Add some humor
   I don’t know
Appendix Q
CATCH My Breath Post-Program Student Survey

**CATCH My Breath Student Post-Survey**
This survey asks questions about your knowledge and experiences with E-cigarettes. Read each question carefully and pick the answer that is most true for you. This is not a test and there are no right or wrong answers. Your answers are private and will not affect your grades in any way.

**Question Title**
2. What is your birthdate?
Birthdate:

**Question Title**
3. What is your sex?
Female
Male

**Question Title**
4. Are you Hispanic or Latino/a?
No
Yes

**Question Title**
5. What race or races do you consider yourself to be?
American Indian or Alaska Native
Asian
Black or African American
Native Hawaiian or Other Pacific Islander
White
More than one race

**Question Title**
6. What grade are you in?
6th grade
7th grade
8th grade
9th grade
10th grade
11th grade
12th grade

**Questions 7-10 are about cigarette smoking. Questions in this section do not include E-cigarette use.**

**Question Title**
7. Have you ever smoked a cigarette, or any other kind of tobacco like a cigar or pipe, even one or two puffs?
Yes
No

**Question Title**
8. During the past 30 days, have you smoked a cigarette, or any other kind of tobacco?
Yes
Question Title
9. Do any of your closest friends smoke cigarettes?
None of them
Some of them
Most of them
All of them

Question Title
10. Do your parents smoke cigarettes?
None
Both
Father only
Mother only
I don’t know

The next few questions are about E-cigarettes (including mods and vape pens) and vaping. E-cigarettes include brands such as JUUL, blu, NJOY, V2, 21st Century Smoke and others.

Vaping includes JUULing and other forms of using an E-cigarette.

Question Title
11. Have you ever vaped, even one or two puffs?
Yes
No
12. During the past 30 days, have you vaped?
Yes
No
13. During the past 30 days, on how many days did you vape?
0 days
1 or 2 days
3 to 5 days
6 to 9 days
10 to 19 days
20 to 29 days
all 30 days

Question Title
14. What device did you use to vape? (select all that apply)
JUUL
blu
NJOY
V2
Other (please specify)

Question Title
15. Did your vape contain nicotine?
Yes
No
I don’t know

16. Do you think you will vape in the next year?
A COMMUNITY-BASED E-CIGARETTE PREVENTION PROGRAM

Definitely yes
Probably yes
Probably not
Definitely not

**Question Title**
17. Are you curious about what it would be like to vape?
Definitely yes
Probably yes
Probably not
Definitely not

**Question Title**
18. If one of your best friends offered you a vape, would you try it?
Definitely yes
Probably yes
Probably not
Definitely not

**How much do you agree with the following statements?**

**Question Title**
19. I consider JUUL to be an E-cigarette.
Strongly Agree
Agree
Disagree
Strongly Disagree

**Question Title**
20. I would enjoy vaping.
Strongly Agree
Agree
Disagree
Strongly Disagree

**Question Title**
21. Vaping would help me to deal with problems or stress.
Strongly Agree
Agree
Disagree
Strongly Disagree

**Question Title**
22. Vaping will help me make new friends.
Strongly Agree
Agree
Disagree
Strongly Disagree

**Question Title**
23. Vaping would make me wake up and feel energized.
Strongly Agree
Agree
Disagree
Strongly Disagree

**Question Title**
24. Vaping would make it harder for me to play sports.
   Strongly Agree
   Agree
   Disagree
   Strongly Disagree

**Question Title**
   Strongly Agree
   Agree
   Disagree
   Strongly Disagree

**Question Title**
26. Most kids my age vape.
   Strongly Agree
   Agree
   Disagree
   Strongly Disagree

**Question Title**
27. Most kids in high school vape.
   Strongly Agree
   Agree
   Disagree
   Strongly Disagree

*The remaining questions ask about your knowledge about E-cigarettes.*

**Question Title**
28. How many *high school students* do you think have vaped in the past 30 days?
   0-20%
   21-40%
   41-60%
   61-80%
   81-100%
   I don't know

**Question Title**
29. Nicotine is addictive and harmful to the body.
   True
   False
   I don't know

**Question Title**
30. When you are addicted to something, you lose control.
   True
   False
   I don't know

**Question Title**
31. E-cigarette vapor contains mostly water.
   True
   False
   I don't know
Question Title
32. Most E-cigarettes, including JUUL, contain nicotine.
   True
   False
   I don’t know

Question Title
33. Most sweet, candy and fruit flavored E-cigarettes contain nicotine.
   True
   False
   I don’t know

Question Title
34. How much nicotine is in a JUUL compared to other E-cigarettes?
   More than other E-cigarettes
   About the same
   Less than other E-cigarettes
   I don’t know

Question Title
35. Which of the following is NOT a main part of E-liquid (or E-juice)?
   Water
   Flavoring chemicals
   Nicotine
   Propylene Glycol
   I don’t know

Question Title
36. It is illegal for teens under 18 to use E-cigarettes.
   True
   False
   I don’t know

Question Title
37. Direct pressure is advertising that everyone knows is paid for by the tobacco or E-cigarette industry on bill boards, magazines, television, and on the internet.
   True
   False
   I don’t know

Question Title
38. Indirect pressure is advertising that hides who paid for the advertising and often doesn’t even look like advertising.
   True
   False
   I don’t know

Question Title
39. Which of the following is NOT a smart exit strategy refusal strategy?
   Just say no!
   Stand tall with nonsmoking friends
   Put someone down for using E-cigarettes
   Add some humor
   I don’t know
How much do you agree with the following statements about the CATCH My Breath Program?

**Question Title**

40. The CATCH My Breath program increased what I know about E-cigarette use.
   - Strongly Agree
   - Agree
   - Disagree
   - Strongly Disagree

**Question Title**

41. I discussed information I learned from CATCH My Breath with friends or family.
   - Strongly Agree
   - Agree
   - Disagree
   - Strongly Disagree

**Question Title**

42. If I am offered a vape, I feel confident in using a refusal skill from the program.
   - Strongly Agree
   - Agree
   - Disagree
   - Strongly Disagree

**Question Title**

43. I learned a lot about E-cigarettes from the CATCH My Breath program.
   - Strongly Agree
   - Agree
   - Disagree
   - Strongly Disagree

**Question Title**

44. I enjoyed being part of the CATCH My Breath program.
   - Strongly Agree
   - Agree
   - Disagree
   - Strongly Disagree

**Question Title**

45. I am less likely to vape now that I have participated in the CATCH My Breath program.
   - Strongly Agree
   - Agree
   - Disagree
   - Strongly Disagree

**Question Title**

46. The CATCH My Breath program would be effective in getting kids not to vape.
   - Strongly Agree
   - Agree
   - Disagree
   - Strongly Disagree

**Question Title**

47. I understand E-cigarette advertising better because of the CATCH My Breath program.
   - Strongly Agree
   - Agree


Disagree
Strongly Disagree

**Question Title**
48. I think all middle and high school kids should go through the CATCH My Breath program.
Strongly Agree
Agree
Disagree
Strongly Disagree
Appendix R  
CATCH My Breath Stakeholder Post-Program Teacher Survey

1. The CATCH My Breath prevention program was a positive addition to the Summer Challenge Program.
   a. Strongly Agree
   b. Agree
   c. Neutral
   d. Disagree
   e. Strongly Disagree

2. I think all Summer Challenge students should go through the CATCH My Breath program.
   a. Strongly Agree
   b. Agree
   c. Neutral
   d. Disagree
   e. Strongly Disagree

3. The CATCH My Breath curriculum, content, and design met the needs of TTLM’s Summer Challenge students.
   a. Strongly Agree
   b. Agree
   c. Neutral
   d. Disagree
   e. Strongly Disagree

4. Additional Comments:

______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________
Appendix S
TTLM Student Success Coach Facilitator Training Completion Audit

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<th>TTLM Student Success Coach</th>
<th>Trained (Y/N)</th>
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<td>Melanie</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jake</td>
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Appendix T

Scholarly Project IRB Approval or Determination Letter

Date: April 22, 2020

To: Sara Ahten

cc: Rosanna Moreno

From: Office of Research Compliance (ORC)

Subject: SB-IRB Notification of Exemption - 186-SB20-073
   A Community-Based Prevention Program Pilot to Prevent Electronic Cigarette Use Among Teens

The Boise State University ORC has reviewed your protocol application and has determined that your research is exempt from further IRB review and supervision under 45 CFR 46.101(b).

Protocol Number: 186-SB20-073
   Received: 4/8/2020
   Review: Exempt
   Approved: 4/22/2020
   Category: 2
   Expires: 4/21/2023

This exemption covers any research and data collected under your protocol as of the date of approval indicated above, unless terminated in writing by you, the Principal Investigator, or the Boise State University IRB. All amendments or changes (including personnel changes) to your approved protocol must be brought to the attention of the Office of Research Compliance for review and approval before they occur, as these modifications may change your exempt status. Complete and submit a Modification Form indicating any changes to your project.

Exempt protocols are set to expire after three years. Annual renewals are not required for exempt protocols. If the research project will continue beyond three years, a new application must be submitted for review. If the research project is completed before the expiration date, please notify our office by submitting a Final Report.

All forms are available on the ORC website at http://goo.gl/D2FYTV

Please direct any questions or concerns to ORC at 426-5401 or humansubjects@boisestate.edu.

Thank you and good luck with your research.

Office of Research Compliance
Appendix U
IRB Change Modification Approval

Date: June 25, 2020
To: Sara Ahten
cc: Rosanna Moreno
From: Office of Research Compliance (ORC)
Subject: SB-IRB Notification of Approval for Modification - 186-SB20-073

A Community-Based Prevention Program Pilot to Prevent Electronic Cigarette Use Among Teens

The Boise State University ORC has reviewed and approved the proposed modifications to your exempt protocol application.

Protocol Number: 186-SB20-073
Received: 6/17/2020
Review: Exempt
Approved: 6/25/2020
Expires: 4/21/2023
Category: 2

Your research is still exempt from further IRB review and supervision under 45 CFR 46.101(b). This exemption covers any research and data collected under your protocol as of the date of approval indicated above, unless terminated in writing by you, the Principal Investigator, or the Boise State University IRB. All amendments or changes (including personnel changes) to your approved protocol must be brought to the attention of the Office of Research Compliance for review and approval before they occur, as these modifications may change your exempt status. Complete and submit a Modification Form indicating any changes to your project.

This modification does not change your expiration date.

All forms are available on the ORC website at http://goo.gl/D2FYTV

Please direct any questions or concerns to ORC at 426-5401 or humansubjects@boisestate.edu.

Thank you and good luck with your research.

Office of Research Compliance
Appendix V
TTLM Social Media Post

True to Life Ministries

June '19

TTLM is excited to offer an afternoon seminar to educate local students about the dangers and consequences of vaping! The seminar will be hosted at the TTLM office on Monday, June 29th from 12-5 p.m.

We are overjoyed to have our friend Rosanna Moreno facilitate this event! She is a lifelong resident of Brazoria County, and she is a dedicated nursing leader with over 15 years of experience in newborn, neonatal, pediatric, and adult care nursing. She has a huge heart for students in our community and serves as a volunteer student ministry leader with Brazos Pointe Fellowship. Driven by her passion, she is currently pursuing a doctoral degree with an emphasis on preventing teen use of electronic cigarettes through community partnership and education!

To register for this FREE event, click the link below: https://bit.ly/378Hz7

This seminar is presented by TTLM in partnership with CATCH My Breath Vaping Prevention.
Appendix W
TTLM Event Flyer

PRESENTED BY TRUE TO LIFE MINISTRIES

Teen Vaping Prevention

Hosted at the TTLM Office

12-5 P.M.
June 29th, 2020
105 This Way

FREE for students
Lunch & snacks provided
Scan QR code to sign up

Facilitated by Rosanna Moreno
### Appendix X

**Google Form Student Sign Up List**

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
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<tr>
<td>1</td>
<td>Timestamp</td>
<td>Username</td>
<td>Student's First Name</td>
<td>Student's Last Name</td>
<td>Grade Level</td>
<td>Which school do you attend?</td>
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<td><a href="mailto:lisa1991@gmail.com">lisa1991@gmail.com</a></td>
<td>Lisa</td>
<td>Luna</td>
<td>Freshman</td>
<td>Brackwood</td>
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<td>3</td>
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<td><a href="mailto:primacena409@gmail.com">primacena409@gmail.com</a></td>
<td>Primo</td>
<td>Acuna</td>
<td>Junior</td>
<td>Angleton High School</td>
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<td>4</td>
<td>2020/06/20 11:20:55 AM EST</td>
<td><a href="mailto:kayslouie@gmail.com">kayslouie@gmail.com</a></td>
<td>Kayla</td>
<td>Smith</td>
<td>Junior</td>
<td>Angleton High School</td>
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<td><a href="mailto:rackleyheath@gmail.com">rackleyheath@gmail.com</a></td>
<td>Avery</td>
<td>Rackley</td>
<td>Sophomore</td>
<td>Angleton High School</td>
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<td><a href="mailto:brodie845@gmail.com">brodie845@gmail.com</a></td>
<td>Brodie</td>
<td>Rackley</td>
<td>Freshman</td>
<td>Angleton High School</td>
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<td><a href="mailto:omg-its-jay@gn.com">omg-its-jay@gn.com</a></td>
<td>Jp</td>
<td>Moreno</td>
<td>Senior</td>
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<td>Ava</td>
<td>Rutkowsk</td>
<td>Freshman</td>
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<td>Jordan</td>
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<td>Senior</td>
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<td>currin</td>
<td>Thomson</td>
<td>Freshman</td>
<td>Del Webb (Nevada)</td>
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<td><a href="mailto:moorecc078@gmail.com">moorecc078@gmail.com</a></td>
<td>Joaquin</td>
<td>Moreno</td>
<td>8th grade</td>
<td>Angleton Junior High</td>
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</table>
Appendix Y
Icebreaker and Brain break Slides

Welcome!
Please pick your seat
Clean your hands
Grab some lunch
Snap your survey
Pick ONE wrapped candy

Introduction Game
Give your name, school you attend and grade
Then...
Reese’s Pieces: Favorite vacation and why.
KitKat: Favorite movie or TV show
Reese’s Cup: Favorite food or Restaurant
Hershey Bar: Favorite music artist

Brain Breaks!
Win Prizes

You have 90 seconds to come up with the most words using the letters below. Winner gets a prize!

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<th>W</th>
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<tr>
<td>I</td>
<td>F</td>
<td>D</td>
<td>B</td>
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</tbody>
</table>

Don’t look at me!
The object of the game is not to look into anyone’s eyes. The winner gets a prize.

Paper Airplane
You will have 90 seconds to create your best paper airplane. Best flyer wins a PRIZE!
Appendix Z
CMB One Day Agenda

Welcome
- Lunch
- Pre-Survey
- Introduction Game

Module 1
- Pre-quiz
- Module content
- Small Group Activity
- Post-quiz
- Brain Game #1

Module 2
- Pre-quiz
- Module content
- Small Group Activity
- Post-quiz
- Brain Game #2

Module 3
- Pre-quiz
- Module content
- Small Group Activity
- Post-quiz
- Brain Game #3

Module 4
- Pre-quiz
- Module content
- Small Group Activity
- Post-quiz
- Brain Game #4

Wrap Up
- Post-Survey
Appendix AA
Session 3, Activity 2 Continued

Tobacco & E-cigarette Law Investigation

Introduction
The majority of rules and laws that affects young people are made and enforced by adults. Therefore, it is important to understand the full scope of rules and laws regarding tobacco and e-cigarettes and find ways to change existing or create new ones.

This activity provides the tools to start the search for rules and laws regarding tobacco and e-cigarette that directly impact young people, especially those still in high school.

Directions
1. Split your workgroups into two teams.
   Team one: Find the answers to the school rules questions.
   Team two: Find the answers to the local, state, and national rules.
2. For each line, each team indicates YES(Y) or NO(N) whether these rules applies at the school district level OR the local, state, and/or national level.
3. For each YES(Y), team members should discuss how to strengthen the rule.
4. For each NO(N), team members should work outside of class to write their own rule.

For city, county, or state tobacco control agencies

1. Visit the websites below to learn about your state’s tobacco control rules and policies.
   https://publichealthlawcenter.org/resources/us-e-cigarette-regulations-50-state-review
   https://www.lung.org/our-initiatives/tobacco/reports-resources/solo/

2. Visit the websites below to learn about national tobacco rules and policies.
   https://tobaccopolicycenter.org/tobacco-control/other-tobacco-products/
   https://tobaccopolicycenter.org/tobacco-control/youth-initiation/

For school district wellness councils

1. To learn about your school districts’ tobacco rules and policy, perform the following web search:
   SCHOOL DISTRICT NAME AND School Tobacco Policy
   SCHOOL DISTRICT NAME AND Student Conduct Tobacco and Possession

2. Visit these websites to learn more about what schools across the country are doing.
   https://www.tobaccofreekids.org/assets/factsheets/3153.pdf
Appendix AB
Session 3, Activity 2 Continued

Let Your Voice Be Heard

Introduction
Working together in your group, draft an email directed towards Tobacco Control and Prevention officials OR your school district’s wellness committee. Elect one member of your group to act as the “scribe” and type the email.

Directions for city, county, or state tobacco control agencies

1. For your city, county, or state tobacco control officials visit the following website and click on your state to find the appropriate email addresses. Note: you will not be required to send the email, but it is a good exercise to understand where to find the necessary contact information.
2. Use the template provided below to prepare an email directed to local tobacco control officials charged with tobacco control and prevention.
3. To help your group prepare the bullet points for your email, look at the checklist with city, count, state, and/or federal tobacco and e-cigarette rules.
   a. For the items checked ‘No’ suggest that tobacco control officials consider your modified or new policy.
   b. You can also suggest changes to existing rules, based on your group discussion.
4. Make sure to edit the parts of the email that are highlighted in YELLOW and BOLD.
   a. These are just placeholders for your own information.
5. If you would like to craft your own email and not use the template, make sure you go through a thorough review process before sending, to ensure a high-quality product free of errors is sent.
Appendix AC
Summer Challenge/CMB Timeline

Summer Challenge/CMB Timeline
The Impact of the COVID-19 Pandemic on TTLM and 2020 Summer Challenge

- **November 2019**: Summer Challenge Planning
  - Plan: Offer one-week long CMB program for both Summer Challenge sessions

- **April 2020**: Summer Challenge Planning
  - Plan: Unchanged from November 2019

- **May 2020**: June cohort cancelled
  - TTLM decides to cancel 1st Summer Challenge cohort in June

- **Early June 2020**: Layoffs
  - TTLM Student Services team laid off, TTLM still planning on hosting 2nd summer Challenge cohort in July

- **Mid-June 2020**: Summer Challenge Canceled
  - After much deliberation, TTLM decides to cancel Summer Challenge completely. Explores alternative approach to present CMB curriculum to community teens.

- **Late June 2020**: CMB Seminar
  - Team quickly planned, advertised, and implemented a one-day CMB Seminar hosted by TTLM for local teens.
### Session 1 Pre Quiz

<table>
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<tr>
<th>Student No.</th>
<th>Session 1 Pre Quiz</th>
<th>Session 1 Post Quiz</th>
<th>Session 2 Pre Quiz</th>
<th>Session 2 Post Quiz</th>
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### Session 2 Pre Quiz

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<th>Session 2 Post Quiz</th>
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<td>Food, drinks, snacks</td>
<td></td>
<td>$150.00</td>
</tr>
</tbody>
</table>