Youth Tobacco Use in Hamilton County:

Exploring Its Relationship with Socioeconomic Status, and Risk and Protective Factors

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Abstract

Risk and protective factors can play imperative roles throughout an individual's life. This project examines the literature behind known factors, and how those can play a role in regards to substance use, specifically of tobacco products. This information is then used to analyze youth tobacco use data in Hamilton County and its zip codes. Comparisons are made in use between those who do/don't experience the factors, as well as if these factors differ significantly based off of a zip code's Socioeconomic Status (SES). Specifically in low SES zip codes it is recommended to increase youth's involvement in extra-curricular activities. Implementation of electronic-vapor education, as well as, policies that restrict the number of tobacco retailers, advertisements, and price promotions, are recommendations to strengthen protective factors across Hamilton County.

Introduction

Tobacco was first commercially grown in America in 1612. The first link between smoking and lung cancer was found in 1939, but it wasn't until 1964 that the United States Surgeon General report determined it to be a cause of lung cancer in men. Whether as leaves, snuff, cigarettes, or other forms, the popularity of tobacco continued to grow in the U.S. over multiple centuries [18]. By the beginning of the 21st century, about one fourth of Americans [2], or 70 million individuals [20] were tobacco users, and youth tobacco use had been on the rise [12]. According to the Centers for Disease Control (CDC), in 1997, more than forty years after the Surgeon General's report, youth past 30-day use of tobacco was 36.4% [19]. In 1998, the Master Settlement Agreement (MSA) was passed. This placed numerous restrictions on tobacco advertisements, promotions and marketing, as well as prohibiting the misrepresentation of the health effects of tobacco products [10]. The Family Smoking Prevention and Tobacco Control Act took effect in September of 2009. This placed a ban on flavored cigarettes, with the exception of menthol [9].

The passing of these laws, which was a direct factor in the reduction of tobacco use across the United States, is considered one of the utmost successes for the field of Public Health. Youth Risk Behaviors Survey (YRBS) reports youth past 30-day use of tobacco as 15.7% [19] in the U.S. In the Greater Cincinnati Region, the youth rate for past 30-day use of tobacco is 8.2% [16]. However, tobacco use continues to be a major health disparity that exists amongst individuals in lower socioeconomic statuses (SES) and low-income neighborhoods [1]. In Hamilton County, 36.4% of student's perceive cigarettes, smokeless tobacco, and cigars are fairly/very easy to get. A little over 2% of students in Hamilton County report using smokeless tobacco and cigars once a month or more [16]. Flavored cigarillos, cigars, dip, electronic

cigarettes and vapor products, as well as hookah still have limited restrictions and are prevalent amongst youth and other vulnerable populations [9].

Literature Review

Hawkins and Catalano describe risk factors as the precursors and predictors to adolescent behavior problems including substance misuse. They list out 17 major risk factors that have been shown to precede drug use and misuse [15]. Protective factors are described as the biological, cultural, social, or psychological characteristics that are associated with lower likelihood of problem outcomes or reduce the negative impact of risk factors [13]. Substance Abuse Prevention Specialist Training [17] lists out important protective factors throughout a child's adolescent lifespan. These risk and protective factors outlined are:

Risk Factors

1. Laws and norms favorable to behaviors
2. Availability
3. Extreme economic deprivation
4. Neighborhood disorganization
5. Physiological factors
6. Family drug behavior
7. Family management practices
8. Family conflict
9. Low bonding to family
10. Early and persistent problem behaviors
11. Academic failure
12. Low commitment to school
13. Peer rejection in elementary grades
14. Association with drug-using peers
15. Alienation
16. Attitudes favorable to drug use
17. Early onset of drug use

Protective Factors

1. After school activities
2. Faith based resources
3. Non-permissive parenting/the presence of consistent discipline
4. Having siblings/parents that do not model drug use
5. Policies limiting the availability of substances.

Many of the components of low socioeconomic status are identified by Hawkins and Catalano as risk factors [5]. A meta-analysis conducted by Patrick et al showed conflicting evidence in terms of the effect that SES had on substance use. For some, higher family income was associated with substance use because of higher access. For others, lower family income was associated with higher substance use rates due to increased stress and less access to alternative activities. This same meta-analysis did show, though, that lower SES in adolescents 10-21 years old was associated with higher rates of smoking [8]. Analysis of both the YRBS and the Add Health Study showed that family income was negatively associated with smoking, meaning that as family income goes up, smoking rates go down. The YRBS also showed that lower education level of adults in the home was associated with a greater risk of both smoking and heavy episodic drinking. This association continued throughout high school. Specifically, smoking rates were found to be: 26.7% and 16.5% for low and high income, respectively; 27.4% and 18.2% for low and high wealth, respectively; and 24.4% and 9.8% for low and high parental education, respectively [8].

Hawkins and Catalano cite studies that have examined the relationship between minimum drinking age and adolescent drinking and driving and found that the two are negatively correlated. As the minimum drinking age rises, accidents and fatalities go down [5]. Raising the minimum age for purchasing tobacco could see similar reduction in use as alcohol. Schneider et.al conducted a survey on a community in Massachusetts which raised their minimum purchasing age for Tobacco from 18 to 21 years old. From 2006 to 2012 they saw a 6% decrease in youth past 30-day tobacco use, where as in surrounding communities, during that same time frame they saw only a 3% decrease in use. Their study found that the difference in reduction was statistically significant, and concluded that raising the minimum purchasing age for Tobacco had

a significant reduction of youth tobacco use in that community [14]. Increasing the minimum purchasing age and the price of cigarettes has also been shown to decrease tobacco consumption across all adults. The CDC states that a 10% increase in price to tobacco products has decreased tobacco consumption by 3-5% [15].

Point-of-sale strategies are described as being able to help "enhance state and local tobacco control efforts by reducing exposure to tobacco products and advertising in stores." Neighborhoods that are comprised of a predominately low-income and minority population often times have a higher tobacco retail density and more tobacco advertising [1]. Tobacco retail density is calculated by taking the number of locations where tobacco is sold in a geographical parameter, and dividing it by the population of that geographical parameter. In a study published by the American Journal for Public Health, it was found that youth who lived in the 75th percentile or higher for tobacco retail density were 13% more likely to have smoked within the past 30-days than those who lived in the 25th percentile or lower. The study noted that this was often due to both greater number of opportunities to purchase, as well a higher amount of exposure to point-of-sale advertising [6]. Restricting the number of retailers, the amount of advertising, and the price discounting can help to reduce tobacco consumption in neighborhoods; therefore, helping to reduce a major health disparity that exists in low-income communities [1].

As Hawkins and Catalano explain, "The problems associated with alcohol and other drug abuse carry costs in lost productivity, lost life, destruction of families, and a weakening of the bonds that hold the society together." [5]. The CDC estimates that tobacco costs the economy $156 billion due to loss of productivity. This estimate includes $5.6 billion due to secondhand smoke exposure. For medical costs, the CDC estimates that it costs the U.S. almost $170 billion. This amounts to over $300 billion in additional costs [15]. Smoking and Tobacco use remains

the leading cause of preventable illness and death in the United States. It accounts for 1 out of every 5 deaths, and more than 16 million Americans live with a smoking-related disease [2]. With the surfacing and rise in E-Cigarettes and Electronic Vapor products [15], a national adult smoking rate of 15.1% [2], and cost of over $300 billion dollars [15], it is critical to reduce and prevent tobacco use.

Research shows that efforts aimed to reduce youth exposure to risk factors and increase exposure to protective factors can have a serious impact on substance use and misuse. It is noted that early prevention interventions fail when they solely focus on drug information and do not address known risk factors [5]. According to Patrick et al, assessment of the associations between childhood and adolescent SES, and young adult substance use helps to identify the most appropriate targets for cost effective and efficient prevention programs [8].

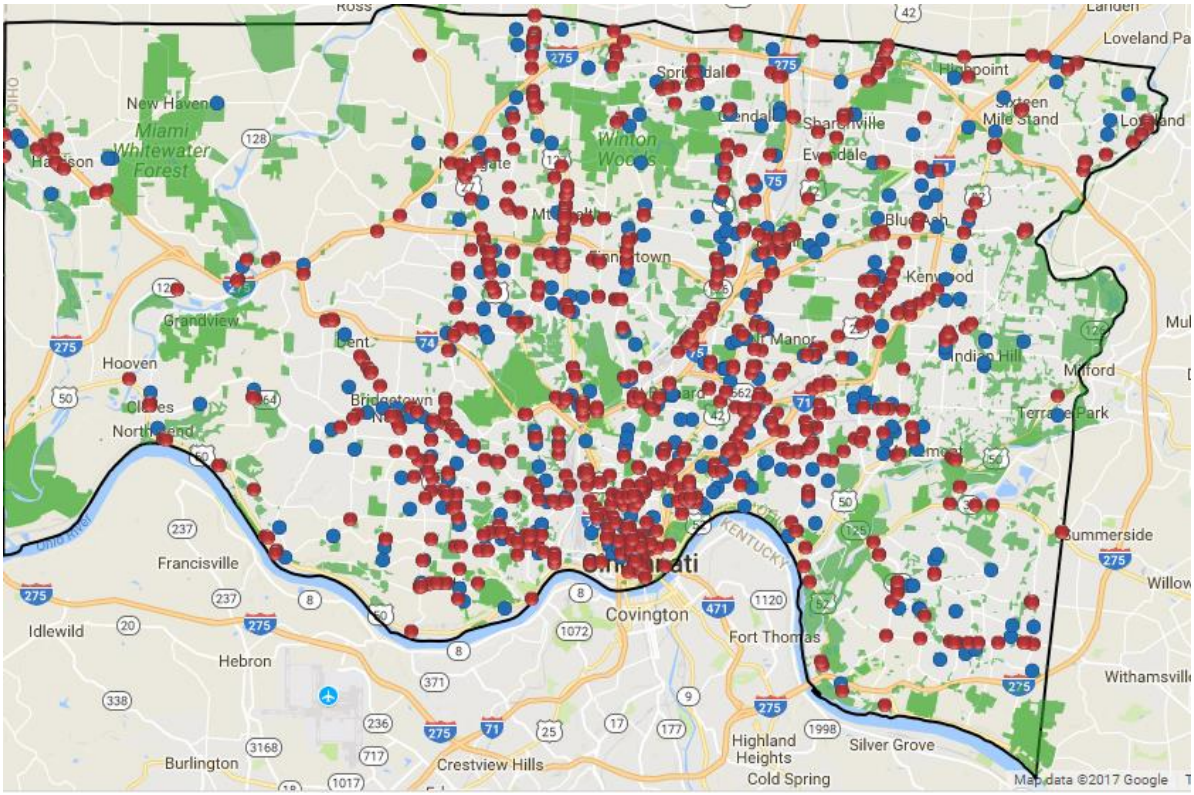
Background

Hamilton County is an urban and suburban county located in the Southwest corner of Ohio. The major urban city of the county is Cincinnati. According to the 2010 U.S Census, the population of Hamilton County is roughly 802,000, and the population of Cincinnati is about 297,000 people. The racial make-up is 68.8% white alone; 25.7% Black or African American; 4.4% Asian, American Indian/Alaska Native, Native Hawaiian/Pacific Islander, or two or more races; and 2.6% is of Hispanic Origin [11]. Median Household Income for the zip codes of Hamilton County ranges from $10,827 to $131,136. Percent living in poverty ranges from 2%-6% [3]. The City of Cincinnati is unique in its make-up with drastic differences in SES by neighborhoods. Oftentimes neighborhoods with low and high SES could be side-by-side and only separated by a railroad track or specific intersection.

With 800 tobacco retailers in the county that leaves the density of 1 per 1,000 individuals. The heaviest concentration is in the central business district. The corresponding zip code of 45202 has a presence of 55 tobacco retailers and a population of 15,483 [7]. This means the tobacco density is 3.6 per 1,000 individuals. Five zip codes: 45111, 45150, 45014, 45013, 45033; had the lowest density which was 0.

The PreventionFIRST! Student Drug Use Survey estimates the youth cigarette use past 30-day rate to be 8.2%. Specifically in Hamilton County, the past 30-day rate of cigarette use is 4.6%, and past 30-day use of electronic-vapor products is 9.0%. More than a third of students in Hamilton County find tobacco and electronic-vapor products fairly/very easy to obtain at 36.4% and 36.1%, respectively [16].

The map below shows the distribution of tobacco retailers (red dots) and schools (blue dots):



[7]

Methodology

Grouping

For all of the zip codes in Hamilton County [4], data was collected on percentage of individuals with a high school diploma or higher, median household income, percentage of individuals living below the poverty level, and population [3]. Insufficient data was available on the zip codes 45041, 45051, 45147, 45221 and were therefore omitted from the analysis. Principal Component Analysis (PCA) was used to rank the zip codes, and cluster analysis was used to group the zip codes into three groups. The first 10 ranking zip codes were placed into Group1, the next 26 were placed into Group2 and the last 19 were placed into Group3. Ranges for Median Household Income are: Group1=$131,136-$75,721; Group2=$71,001-$43,867; Group3=$40,313-$10,827.

PreventionFIRST Student Drug Use Survey

The Student Drug Use Survey (SDUS) is PreventionFIRST!'s modified version of PRIDE Survey's Questionnaire. This survey is administered every other year to schools in the Greater Cincinnati Region, with varying participation each year. The 2015-2016 results were used as the major data analysis of this project. A census was taken of every participating schools' 7^{th}-12^{th} grade population. All surveys go through a series of honesty checks to ensure accurate results are reported. The SDUS has undergone scientific review and is accepted as a valid and reliable tool for data collection on youth substance use and other healthy behaviors. For Greater Cincinnati a total of 39,085 surveys were returned and accepted as valid responses. For Hamilton county, the response total was 12,721. Data was separated by zip codes, and placed into its corresponding group for data analysis. The sizes of the three groups were: Group1=

3,553; Group2= 5,130; and Group3= 1,474. Analysis was conducted in both SPSS and R statistical software. Please see figure 1a on page 34 for an attachment of the survey and highlighted questions used [16].

Environmental Scans

Once in groups, 4 random numbers were generated from a sample of 1-10, 11-37, and 38-55. The zip codes with the corresponding PCA ranking were selected to do environmental scans. A list of all tobacco retailers for each zip code was obtained from CounterTools [7]. Twenty-five environmental scans were conducted for each group. The 25 locations were selected randomly and mostly based off of location for reasons of time and feasibility. Due to safety reasons, data could not be collected from the interior of every location.

Focus Group Discussions and Questionnaires

A total of 23 Focus Groups were conducted on two separate occasions. One was conducted with a group of ten, 9^{th}-12^{th} graders from a public High School in Hamilton County while on a volunteer day at PreventionFIRST! on 9/29/17. The students were both male and female-demographics were not recorded. The remaining 22 focus groups were conducting at PreventionFIRST!'s 2017 Red Ribbon Week Youth Summit on 10/20/17 with 192 kids. The individuals who participated were from High Schools in the following counties of the Greater Cincinnati Region: Boone(KY), Butler(OH), Clermont(OH), Dearborn/Ripley(IN), Franklin(KY), Hamilton(OH), Kenton(KY), and Montgomery(OH). Students were both male and female, ranging from grades 9^{th}-12^{th}, and were randomly assigned into one of the twenty-two groups. Please see figure 2a on page 38 for the list of guided focus group questions.

Analysis and Results

Student Drug Use Survey

Analysis of the Student Drug Use Survey [16] was conducted to examine two main research questions: 1. Does past 30-day use of Cigarettes, Electronic-Vapor, and Smokeless Tobacco differ among the two populations of those who report no-low exposure to a risk/protective factor, and those who report medium-high exposure to that risk/protective factor?; 2. Does exposure to these risk/protective factors differ among zip code groups?

Hamilton County Demographics Survey Demographics

Survey demographics for all of Hamilton County are summarized below. 4.6% identified as Hispanic.

Race	Hamilton County
White	74.9%
Black or African American	14.0%
Native American/Alaska Native	0.5%
Asian	1.7%
Native Hawaiian or Pacific Islander	0.2%
Other	2.6%
Multi-Racial	6.0%

Zip Code Group Demographics

Survey demographics for the zip code groups are listed below. 3.6%, 4.1%, and 6.6% identified as Hispanic, respectively.

Race	Group1	Group2	Group3
White	90.0%	78.2%	39.4%
Black or African American	1.4%	11.2%	44.7%
Native American/Alaska Native	0.3%	0.3%	1.1%
Asian	2.1%	1.9%	0.6%
Native Hawaiian or Pacific Islander	0.1%	0.2%	0.1%
Other	6.4%	8.2%	14.2%

On the data for all of Hamilton County, cross tabulations were ran between past 30-day use of tobacco substances (Cigarettes, E-Vapor, and Smokeless Tobacco) and an array of known risk and protective factors that are asked on the survey. Percentages were calculated of past 30-

day use within those who said they experience the risk/protective often/a lot and those who said they experience it never/seldom/sometimes. These values, as well as, the p-value for the Chi-Squared statistic were calculated in SPSS. The following tables display the results:

Risk Factors

Rates of Past 30-Day Use of Cigarettes from the Student Drug Use Survey, separated by no-low exposure to the risk factor (column 2) and medium-high exposure to the risk factor (column 3).

Variable	**Past 30 Day Use of Cigarettes within Never/Seldom/Sometimes Very/Fairly Difficult**	**Past 30 Day Use of Cigarettes within Often/A lot Fairly/Very Easy**	**Pearson's Chi-Sq p-value**
Gets Into Trouble	4.1%	18.2%	0.000
Experiences Stress	3.3%	5.6%	0.000
Friends Use Tobacco	2.1%	23.3%	0.000
Ease of Obtaining Tobacco	1.5%	9.9%	0.000

Protective Factors

Rates of Past 30-Day Use of Cigarettes from the Student Drug Use Survey, separated by no-low exposure to the protective factor (column 2) and medium-high exposure to the protective factor (column 3).

Variable	Past 30 Day Use of Cigarettes within Never/Seldom/Sometimes No Risk/Slight Risk Not at All/A Little Wrong	Past 30 Day Use of Cigarettes within Often/A lot No Risk/ Slight Risk Wrong/Very Wrong	Pearson's Chi-Sq p-value
Participate in Clubs	3.2%	1.3%	0.000
Get Good Grades	10.2%	3.2%	0.000
Participate in School Sports	6.2%	2.9%	0.000
Participate in Community	3.5%	1.0%	0.000
Attend Religious Meetings	5.5%	2.9%	0.000
Parents talk about Dangers of Drugs	5.1%	3.6%	0.000
Parents Set Clear Rules on Drugs	8.0%	3.4%	0.000
Parents Punish for Breaking Rules	7.4%	3.8%	0.000
Teachers talk about Dangers of Drugs	4.9%	3.3%	0.000
Schools Set Clear Rules on Drugs	6.2%	4%	0.000
Schools Punish for Breaking Rules	6.4%	4.3%	0.000
Perception of Risk of Tobacco	8.1%	3.4%	0.000
Perception of Friend Disapproval	14.3%	1.9%	0.000
Perception of Parent Disapproval	23.1%	3.4%	0.000

Risk Factors

Rates of Past 30-Day Use of Electronic-Vapor from the Student Drug Use Survey, separated by no-low exposure to the risk factor (column 2) and medium-high exposure to the risk factor (column 3).

Variable	**Past 30 Day Use of Electronic-Vapor within Never/Seldom/Sometimes Very/Fairly Difficult**	**Past 30 Day Use of Electronic-Vapor within Often/A lot Fairly/Very Easy**	**Pearson's Chi-Sq p-value**
Gets Into Trouble	8.2%	23.2%	0.000
Experiences Stress	6.5%	10.7%	0.000
Friends Use Tobacco	6.0%	29.7%	0.000
Ease of Obtaining Electronic-Vapor	3.0%	19.1%	0.000

Protective Factors

Rates of Past 30-Day Use of Electronic-Vapor from the Student Drug Use Survey, separated by no-low exposure to the protective factor (column 2) and medium-high exposure to the protective factor (column 3).

Variable	Past 30 Day Use of Electronic-Vapor within Never/Seldom/Sometimes No Risk/Slight Risk Not at All/A Little Wrong	Past 30 Day Use of Electronic-Vapor within Often/A lot No Risk/ Slight Risk Wrong/Very Wrong	Pearson's Chi-Sq p-value
Participate in Clubs	9.9%	7.1%	0.000
Get Good Grades	17.3%	6.7%	0.000
Participate in School Sports	9.6%	7.7%	0.000
Participate in Community	9.4%	7.1%	0.000
Attend Religious Meetings	9.9%	6.7%	0.000
Parents talk about Dangers of Drugs	9.4%	7.7%	0.001
Parents Set Clear Rules on Drugs	13.6%	7.1%	0.000
Parents Punish for Breaking Rules	12.9%	7.5%	0.000
Teachers talk about Dangers of Drugs	9.2%	7.2%	0.001
Schools Set Clear Rules on Drugs	11.0%	8.0%	0.000
Schools Punish for Breaking Rules	10.7%	8.5%	0.000
Perception of Risk of E-Vapor	15.5%	3.0%	0.000
Perception of Friend Disapproval	20.6%	2.1%	0.000
Perception of Parent Disapproval	33.1%	6.1%	0.000

Risk Factors

Rates of Past 30-Day Use of Smokeless Tobacco from the Student Drug Use Survey, separated by no-low exposure to the risk factor (column 2) and medium-high exposure to the risk factor (column 3).

***Denotes p-value is greater than 0.05, therefore there is not a significant difference between the two-groups**

Variable	**Past 30 Day Use of Smokeless Tobacco within Never/Seldom/Sometimes Very/Fairly Difficult**	**Past 30 Day Use of Smokeless Tobacco within Often/A lot Fairly/Very Easy**	**Pearson's Chi-Sq p-value**
Gets Into Trouble	3.8%	22.6%	0.000
Experiences Stress	4.1%	4.7%	0.106*
Friends Use Tobacco	2.2%	21.9%	0.000
Ease of Obtaining Tobacco	1.4%	9.3%	0.000

Protective Factors

Rates of Past 30-Day Use of Smokeless Tobacco from the Student Drug Use Survey, separated by no-low exposure to the protective factor (column 2) and medium-high exposure to the protective factor (column 3).

***Denotes p-value is greater than 0.05, therefore there is not a significant difference between the two-groups**

Variable	Past 30 Day Use of Smokeless Tobacco within Never/Seldom/Sometimes No Risk/Slight Risk Not at All/A Little Wrong	Past 30 Day Use of Smokeless Tobacco within Often/A lot No Risk/ Slight Risk Wrong/Very Wrong	Pearson's Chi-Sq p-value
Participate in Clubs	5.5%	2.9%	0.000
Get Good Grades	9.2%	3.3%	0.000
Participate in School Sports	3.5%	5.0%	0.000
Participate in Community	4.7%	3.7%	0.017
Attend Religious Meetings	4.9%	3.6%	0.000
Parents talk about Dangers of Drugs	4.6%	4.8%	0.083*
Parents Set Clear Rules on Drugs	8.0%	3.3%	0.000
Parents Punish for Breaking Rules	7.2%	3.8%	0.000
Teachers talk about Dangers of Drugs	4.8%	3.0%	0.000
Schools Set Clear Rules on Drugs	7.5%	3.5%	0.000
Schools Punish for Breaking Rules	6.3%	4.2%	0.000
Perception of Risk of Tobacco	8.9%	2.7%	0.000
Perception of Friend Disapproval	14.8%	1.4%	0.000
Perception of Parent Disapproval	23.5%	3.1%	0.000

These results show statistical significance on the impact that risk and protective factors have on past 30-day use of cigarettes. From these results, one would conclude that in Hamilton County, each risk factor has an increasing effect on use and each protective factor as a decreasing effect on use.

The percentages of students within each zip code group who responded either yes to past 30-day use or reported medium-high exposure to the risk/protective factors were calculated and reported below. Analysis of variance was then conducted to examine if exposure to these risk and protective factors differed significantly among the three zip code groups.

Group Rates

The percentages of students within each zip code group who responded either yes to past 30-day use or reported medium-high exposure to the risk/protective factors.

Factor	Group1	Group2	Group3
Perception of Risk for Tobacco Moderate/Great Risk	83.0%	73.7%	71.6%
Past 30-Day Use of Cigarettes	4.1%	4.6%	5.9%
Past 30-Day Use of E-Vapor	7.2%	8.1%	8.1%
Past 30-Day Use of Smokeless Tobacco	1.9%	3.3%	1.0%
Past 30-Day Use of Cigars	1.9%	3.2%	2.5%
Teachers Talk about ATOD Often/A lot	24.3%	20.9%	24.5%
Schools Set Clear Rules Often/A lot	79.6%	76.6%	66.1%
School Punish when Rules Are Broken Often/A lot	74.6%	79.3%	72.3%
Parents talk about ATOD Often/A lot	44.8%	40.0%	44.4%
Parents Set Clear Rules Often/A lot	80.1%	76.3%	73.0%
Parents Punish when Rules are Broken Often/A lot	65.8%	65.6%	61.9%
Participates In Community Activities Often/A lot	37.3%	31.8%	20.2%
Participates in School Clubs Often/A lot	49.6%	44.5%	30.2%
Participates in School Sports Often/ A lot	58.1%	53.1%	37.7%
Experiences Stress Often/A lot	51.2%	58.1%	44.5%
Access to Tobacco is Fairly/Very Easy	34.2%	39.3%	36.3%
Parental Disapproval of Tobacco Wrong/ Very Wrong	97.9%	95.2%	92.2%
Friend Disapproval of Tobacco Wrong/ Very Wrong	81.7%	75.5%	76.8%

Significant Results

Results where factors were statistically significant among the zip code groups. The p-value indicates results between those two groups were significantly different. The dash indicates the results were between those two groups were not significantly different.

Factor	**Results where p-value was found to be below 0.05.**		
	Group1-Group2	**Group2-Group3**	**Group3-Group1**
Perception of Risk for Tobacco Moderate/Great Risk	0.006	—	0.00158
Parents Set Clear Rules on ATOD Often/A lot	—	—	0.03019
Participates in School Clubs Often/A lot	—	$< 1*e^{-04}$	$< 1*e^{-04}$
Participates In Community Activities Often/A lot	—	0.000857	0.000116
Participates in School Sports Often/ A lot	—	0.000408	0.000227
Experiences Stress Often/A lot	—	0.000923	—
Parental Disapproval of Tobacco Wrong/ Very Wrong	—	0.013341	0.000177

Protective Factors and Use Rates where differences among groups were *not found* to be statistically significant:

- Past 30-Day use of Cigarettes
- Past 30-Day use of Electronic Vapor
- Past 30-Day use of Smokeless Tobacco
- Past 30-Day use of Cigars
- Teachers talk with students often/a lot about Alcohol, Tobacco, and Other Drugs
- School sets clear rules of Alcohol, Tobacco, and Other Drug Use
- School punishes when these rules are broken
- Parents talk often/a lot about Alcohol, Tobacco, and Other Drugs
- Parents set clear rules often/a lot
- Parents punish when rules are broken often/a lot
- Friend disapproval of Tobacco wrong/very wrong

Environmental Scans of Tobacco Outlets

The average number of tobacco outlets for each group were 7.6, 16.9, and 14.8, respectively. Analysis of Variance (ANOVA) was conducted to see if the difference in the number of tobacco outlets per zip code was statistically significant between the zip code groups. The p-value estimate was 0.095 which is greater that α=0.05, therefore, one would conclude that the number of tobacco outlets per zip code does not differ among zip code groups.

The density of tobacco retailers was calculated for each zip code by taking the number of tobacco retailers divided by the population. The average density per zip code group was 0.00047, 0.00084, and 0.0014. ANOVA was conducted to see if the difference in density of tobacco retailers by zip code was statistically significant between the groups. ANOVA returned a p-value of 0.00094, therefore, Tukey's post hoc analysis was completed and found that Group3 differed significantly from Group1 (p-value: 0.0013) and Group2 (p-value: 0.012), but Group1 and Group2 did not statistically differ from one another (p-value: 0.27). Given this analysis you would conclude that in regards to population size there is a significantly higher density of tobacco outlets in Group3 than there is in Group1 and Group2.

After conducting 25 environmental scans in the three different groups, a number of factors stood true across all three groups. All three groups had tobacco outlets that had a heavy amount of external tobacco advertisements, as well as retailers that had no external tobacco advertisements. For example: United Dairy Farmer's locations characteristically had no advertisements, other than for their own products, on the outside of the infrastructure. Locations like Speedways and locally owned convenience stores typically had an array of external signs on their buildings for tobacco advertisements and promotions. All three groups had multiple locations that were within half a mile of a school, and that accepted WIC/SNAP/EBT. The vast

majority of locations sold all products scanned for: cigarettes, cigarillos, cigars, electronic-vapor, and chew/snuff/dip. A few locations did not cell cigars, and a few did not sell electronic-vapor products. Almost every location had tobacco priced under $1, which was most notably plain and flavored cigarillos which were in packs of 2 for $0.99. When able, clerks were asked their opinion of the top selling brand. Almost every clerk- regardless of zip code- mentioned Marlboro or more specifically, Marlboro Gold.

There were also many notable differences amongst the groups. Although there were locations in every group within a half mile of a school, only 7 of the 25 visited in Group1 were within a half mile of a school. Group3 had 16 out of 25, and Group2 had 3 out of 25 within a half mile of a school. Another key piece of information was that all 25 locations visited in Group1 were either a gas station, a grocery store, or Pharmacy. In both Group2 and Group3, there was a strong presence of independently owned convenience stores without gas, and mass merchandisers like Family Dollar and Dollar General. Most chain merchandisers had no external advertisements in regards to tobacco use, however, in Group2, there was a Dollar General with large tobacco signs on the outside. This store was also selling a pack of cigarettes that were $2.00. Across the street from this location was an independently owned convenience store, selling a great deal of marijuana paraphernalia listed as “For Tobacco Use Only”.

A Walgreens was visited in each of the three groups. Every Walgreens, with the exception of two, had signs advertising for smoking cessation on the product theft arches that you immediately walk through upon entering the store. Next to the tobacco section at each of these pharmacies, was a tobacco cessation display. At the same two stores where the product theft arches were blank, the tobacco cessation display was noticeably smaller and was unlabeled, unlike the other Walgreens. These locations were: a zip code a part of Group3 and directly across

the street from a Kindergarten-Sixth Grade Cincinnati Public School; and a zip code a part of Group2, 0.6 miles away from Harrison Elementary school in Harrison, Ohio.

Although data on the price of the cheapest pack of cigarettes was unable to be collected at every location, there was an evident trend in the locations it was available. For Group1, cheapest price was recorded for eleven out of the locations, and only one was less than $5.00 at a price of $4.16. Eleven prices were recorded for Group2 with five being below $5.00, two of which were $2.00. Six prices were recorded for Group3 with three being below $5.00 and the cheapest at $1.85.

Focus Groups

In regards to information on tobacco and electronic vapor products there were several prominent trends in the youth's perspectives. Students commented that even with all of the knowledge there is today on the harmful effects of tobacco, it is still a top contender for the substance of choice among youth. The most reported reason was because of easy access. Students reported that their peers are often able to purchase tobacco with either a fake id or without being carded. They also stated that with many high school seniors being over the age of 18, it was easy to simply buy tobacco off of an upperclassman. Another method of access that was frequently mentioned, specifically in regards to electronic-vapor products, was purchasing them off of Amazon.com. With the ability of upperclassman to obtain products, students said that there was somewhat of a "trickle-down" method within the schools.

Almost every student indicated that there was a heavy presence of the substances at their schools. Many mentioned use of electronic-vapor products inside the classrooms, during class. Students said there was heavy amount of passing substances like tobacco, marijuana and e-vapor at lockers and in the bathrooms. When asked the degree of priority that schools place on combating this issue, responses were mixed. Some students stated that their school had been adding smoke detectors to the bathrooms and camera's to the classrooms and hallways. Others mentioned that school administrators and teachers either didn't seem to care or felt that it was simply easier to turn a blind eye to the issue. It was also largely reported how discrete students had become about use and sharing, which makes it quite difficult for staff and faculty to catch those students. Several focus groups brought up a popular e-vapor product called "Juul" which doesn't create smoke, making use during class even more discrete.

Many students, especially upperclassman, brought up how e-vapor products are becoming more and more popular amongst students and that use has become more prominent since they were underclassman. A vast majority of students noted that this was due to a low perception of harm in comparison to tobacco and other substances. When asked to elaborate on why they felt there was such a low perception of harm, a large majority of students agreed that there was little to no education on electronic-vapor products and any potential harm that comes from its use. Students mentioned that most of their education on harmful substances/drugs came before the emergence and main-streaming of e-vapor products. The fact that you could buy Nicotine free e-vapor was mentioned by several groups as a reason why youth seem to have little fear of using the products, and why perception of harm is low. Students did mention, though, that there is the perception that even with Nicotine in the product there really is no harm in getting addicted. They stated this is due to their perception that e-vapor products' lack the heavy carcinogens present in tobacco products.

Discussion

Analysis of the SDUS data for all of Hamilton County showed strong differences in use between those who said they experienced the risk/protective factor often/a lot, and those who said they experienced the risk/protective factor never/seldom/sometimes. All of the findings were consistent with the literature review. Participation in school clubs, community activities and school sports were some of the factors found to have a significant difference in use when students participated in them often/a lot. The analysis found that individuals in Group3 were significantly less likely to participate in these activities than Group1 and Group2. Parental Disapproval was also found to be significantly lower in Group3 than in Group1 or Group2.

Although past 30-day use rates of tobacco products and many factors did not differ amongst the groups, this is not indicative of no connection. As cited in the literature, these risk and protective factors play a role throughout individuals' lives. These early on exposures that differ amongst the zip code groups can still promote/hinder use of other substances, or cause significant differences in tobacco use later on in life for these youth.

Given the consistent findings found between the literature review and the environmental scans it is likely that this could pose to be a continuing and growing problem as youth get older. With the already high exposure and accessibility, once an individual in Group3 begins to reach the age where they are making more and more purchases by themselves, they are disproportionately at risk to pick up tobacco products. Not only do they open themselves up to an environment filled with a statistically higher density of opportunities to purchase, they also open themselves up to more affordable ways to purchase.

The demographics of the focus groups were mixed but many of the students had very consistent thoughts and comments. With all of the knowledge of how detrimental Cigarettes and other Tobacco products can be towards one's health, youth are still using. When asked why almost every response involved how easy it was to obtain. Having individuals who are of age, like high school seniors and upperclassman, in close proximity was their perception of the most common way to their peers obtained tobacco. These transfers are happening on school property and therefore enabling students to be able to use on school grounds. Another strong perception was that there was almost no education whatsoever on electronic-vapor products and their potential harms. Much of this, they noted, was due to their age and the emergence of these products. However, this shows that there is a gap in knowledge that may require modifications to meet these students' health needs.

Biases

A potential bias in the analysis of the SDUS is the spread of neighborhoods in Hamilton County. Often times the zip code may reflect multiple neighborhoods which could have drastically different demographics, and therefore appear to be what one would consider Middle SES. This could cause some of the statistics to be somewhat saturated, therefore giving the appearance the rates among zip codes aren't that different whereas the rates for neighborhoods could be very different.

The environmental scans were conducted by way of convenience sampling. The four zip codes were randomly selected, however within the list of all of the retailers, 25 locations were typically chosen either off of their proximity to one another or off of a logical pathway. This could potentially affect the number of locations that were within a half mile of a school. However, this same method was done for each of the groups, which means the potential for the bias could have occurred in any of the groups. Also, typically a road was traveled for several miles and if multiple locations were within a half mile of a school, it would sometimes end up being different schools.

Often times the issue with youth focus groups, which is also a potential bias in this project, is that you typically get well-behaved youth. This could lead to opinions and thoughts being one sided, as well as, the demographics not being representative of all of today's youth. For this aspect of the project one must conclude that there is still more information to be taken into account on the subject. It is important to note that these results come from Hamilton County and additional counties in the Greater Cincinnati Region. Therefore, these results are only used to gain youth perspective of problems and issues, and are not considered generalize to all students/school in Hamilton County.

Conclusion

Core Competencies

The competency the most met was *Describe a public health problem in terms of magnitude, person, place, and time.* The nature of my capstone was to examine: the magnitude of youth tobacco use across Hamilton County; which demographic this problem affects the most (person); and which zip codes are affected most (place). The majority of my analysis section focuses on the competency *Perform hypothesis tests using population means or proportions to address public health questions.* I used chi-square statistics to test whether rates of past 30-day use of cigarettes, electronic-vapor products, and smokeless tobacco were significantly different between the two populations of those who responded they did have the exposure to the risk/protective factor, and those who said they did not. In addition to this, I used ANOVA to test the hypothesis of whether rates of exposure to these risk and protective factors were the same between zip code groups, or whether they were different among groups. My discussion and conclusion focus greatly on the competency of *Select and apply appropriate measures of association to draw appropriate public health inferences*. In these sections, I tie together information from the literature and my results to make inferences about the association between SES exposure to risk/protective factors, and youth tobacco use.

Concentration Competencies

Another competency that my analysis and results section focused heavily on was *Apply Common Statistical methods for inference.* ANOVA and chi-square statistics were used to conclude if risk and protective factors had an effect in Hamilton County, and if students of different SES had to exposures to risk/protective factors. Percentages were used to summarize the demographics of my data, as well as to report measures of use and availability for Hamilton

County in the literature review. Use of these percentages utilizes the competency of *Apply descriptive techniques commonly used to summarize public health data.* The literature review also met the competencies of *Apply Basic Informatics techniques with vital statistics and public health records in the description of public health characteristics and in public health records* and *Interpret results of statistical analyses found in public health studies.* I researched articles and cited the results of other studies in regards to risk and protective factors like parenting and policies, etc. Lastly, to present my capstone I will meet the competency of *Develop written and oral presentations based on statistical analyses for both public health professionals and educated lay audiences*. There will be a variety of backgrounds listening to my presentation, and I will ensure that my talking points are clear and understandable to all of these individuals.

Implications

The public health implications of this study showed that tobacco use in Hamilton County is significantly impacted when risk and protective factors are taken into account. This demonstrates the active need to reduce risk factors and enhance protective factors. In Hamilton County as a whole, measures to increase awareness on electronic-vapor products could greatly strengthen the knowledge of youth and likely their resiliency towards pop culture and trends. Environmental scans showed that there was a heavy amount of tobacco advertisements near schools across the different zip code groups in Hamilton County. This project suggests implementing policies across Hamilton County that restrict the number of advertisements and price promotions for tobacco and e-vapor products, is a strong strategy towards reducing risk factors for perception of availability and past 30-day use.

Analysis showed that there was a significantly higher amount of tobacco retailers in Group3. Meaning another health implication is the need for policies in low SES zip codes that

place limits on the number of locations that are allowed to serve as tobacco retailers. With the significantly lower likelihood for youth in Group3 to participate in extra-curricular activities, there lies a strong opportunity in these communities to enhance the protective factors by making sure youth have productive use of time, and having them create healthy living goals for themselves.

Community leaders, school personnel, and individuals can all play a role in enhancing/ reducing these factors. Working to integrate these factors and policies in Hamilton County and its' communities will not only help to guide youth away from the negative health consequences of tobacco but also help to make neighborhoods thrive.

References

1. Brossart, L., Mooreland-Russell, S., Walsh, H., Wachtel, A., Anderson, S., Edison, L., . . . Luke, D. (2014). *Point-of-Sale Strategies a Tobacco Control Guide* [PDF]. Public Health Law Center.
2. Current Cigarette Smoking Among Adults in the United States. (2016, December 01). Retrieved November, 2017, from https://www.cdc.gov/tobacco/data_statistics/fact_sheets/adult_data/cig_smoking/index.htm
3. Data Access and Dissemination Systems (DADS). (2010, October 05). American FactFinder - Community Facts. Retrieved September, 2017, from https://factfinder.census.gov/faces/nav/jsf/pages/community_facts.xhtml
4. *Hamilton County Zip Codes*. (2000, April 25). Hamilton County Regional Planning Commission.
5. Hawkins, J. D., Catalano, R. F., & Miller, J. Y. (1992). Risk and protective factors for alcohol and other drug problems in adolescence and early adulthood: Implications for substance abuse prevention. *Psychological Bulletin, 112*(1), 64-105. doi:10.1037/0033-2909.112.1.64
6. Novak, S. P., Reardon, S. F., Raudenbush, S. W., & Buka, S. L. (2006). Retail Tobacco Outlet Density and Youth Cigarette Smoking: A Propensity-Modeling Approach. *American Journal of Public Health, 96*(4), 670-676. doi:10.2105/ajph.2004.061622
7. Ohio Tobacco Mapper by CounterTools. (n.d.). Retrieved October, 2017, from https://mapping.countertools.org/ohio/
8. Patrick, M. E., Wightman, P., Schoeni, R. F., & Schulenberg, J. E. (2012). Socioeconomic Status and Substance Use Among Young Adults: A Comparison Across Constructs and Drugs. *Journal of Studies on Alcohol and Drugs, 73*(5), 772-782. doi:10.15288/jsad.2012.73.772
9. Public Health Law Center. (n.d.). Retrieved October, 2017, from http://www.publichealthlawcenter.org/topics/tobacco-control/sales-restrictions/flavored-products
10. Public Health Law Center. (2015, June 22). Retrieved October, 2017, from http://www.publichealthlawcenter.org/topics/tobacco-control/tobacco-control-litigation/master-settlement-agreement
11. QuickFacts. (n.d.). Retrieved September, 2017, from https://www.census.gov/quickfacts/fact/table/hamiltoncountyohio,US/PST045216
12. Reducing Tobacco Use. (n.d.). Retrieved October, 2017, from https://www.cdc.gov/mmwr/preview/mmwrhtml/rr4916a1.htm
13. Risk & Protective Factors. (n.d.). Retrieved October, 2017, from https://youth.gov/youth-topics/youth-mental-health/risk-and-protective-factors-youth
14. Schneider, S. K., Buka, S. L., Dash, K., Winickoff, J. P., & Odonnell, L. (2015). Community reductions in youth smoking after raising the minimum tobacco sales age to 21. *Tobacco Control, 25*(3), 355-359. doi:10.1136/tobaccocontrol-2014-052207
15. Smoking & Tobacco Use. (2017, November 16). Retrieved November, 2017, from https://www.cdc.gov/tobacco/data_statistics/fact_sheets/economics/econ_facts/index.htm
16. *Student Drug Use Survey* [Youth Substance Use and other Behaviors Survey]. (n.d.). PreventionFIRST!, Cincinnati, OH.

17. *Substance Abuse Prevention Skills Training Version 8* [Risk and Protective Factors]. (2012, November). SAMHSA.
18. *The History of Tobacco* [PDF]. (n.d.). World Health Organization.
19. Trends in Current Cigarette Smoking Among High School Students and Adults, United States, 1965–2014. (2016, March 30). Retrieved October, 2017, from https://www.cdc.gov/tobacco/data_statistics/tables/trends/cig_smoking/index.htm
20. United States of America Population (2000). (n.d.). Retrieved November, 2017, from https://www.google.com/search?q=US%2Bpopulation%2Bin%2B2000&oq=US%2Bpopulation%2Bin%2B2000&aqs=chrome..69i57j0l5.5374j0j7&sourceid=chrome&ie=UTF-8

PRIDE Surveys

THE PRIDE QUESTIONNAIRE FOR GRADES 7-12
sponsored by PreventionFIRST!

• Use a No. 2 pencil only
CORRECT: ● INCORRECT: ✓ ⊗ ◒ ◔

PreventionFIRST! GUIDING COMMUNITIES TO A VIBRANT FUTURE

I. PERSONAL AND FAMILY INFORMATION

1. Race
(mark all that apply)
- ○ White
- ○ Black or African American
- ○ Native American or Alaska Native
- ○ Asian
- ○ Native Hawaiian or other Pacific Islander
- ○ Other

2. Are you Hispanic or Latino/Latina?
- ○ Yes
- ○ No

3. Sex:
- ○ Male
- ○ Female

4. Age:
- ○ 10 Years old or less
- ○ 11 years old
- ○ 12 years old
- ○ 13 years old
- ○ 14 years old
- ○ 15 years old
- ○ 16 years old
- ○ 17 years old
- ○ 18 years old
- ○ 19 years old or older

5. Zip Code:

0	0	0	0	0
1	1	1	1	1
2	2	2	2	2
3	3	3	3	3
4	4	4	4	4
5	5	5	5	5
6	6	6	6	6
7	7	7	7	7
8	8	8	8	8
9	9	9	9	9

6. Grade:
- ○ 7
- ○ 8
- ○ 9
- ○ 10
- ○ 11
- ○ 12

7. Do you live with...
(mark all that apply)
- ○ Both parents
- ○ Mother only
- ○ Father only
- ○ Mother & stepfather
- ○ Father & stepmother
- ○ Extended family
- ○ Other

8. Do you have a job?
- ○ Yes, full-time
- ○ Yes, part-time
- ○ No

9. Do your parents have a job?

	Father	Mother
Yes, full-time	○	○
Yes, part-time	○	○
No	○	○

10. What is the educational level of your:

	Father	Mother
Some high school	○	○
High school graduate	○	○
Some college	○	○
College graduate	○	○

II. STUDENT INFORMATION

	NEVER	SELDOM	SOMETIMES	OFTEN	A LOT
1. Do you make good grades?	○	○	○	○	○
2. Do you get into trouble at school?	○	○	○	○	○
3. Do you take part in school sports teams?	○	○	○	○	○
4. Do you take part in school activities such as band, clubs, etc.?	○	○	○	○	○
5. Do you take part in community activities such as scouts, rec. teams, youth clubs, etc.?	○	○	○	○	○
6. Do you attend church, synagogue, mosque, etc.?	○	○	○	○	○
7. Do your parents talk with you about the dangers of tobacco, alcohol and drug use?	○	○	○	○	○
8. Do your teachers talk with you about the dangers of tobacco, alcohol and drug use?	○	○	○	○	○
9. Does your school set clear rules on using alcohol and drugs during school and school functions?	○	○	○	○	○
10. Does your school punish you when you break the rules about using alcohol and drugs?	○	○	○	○	○
11. Do your parents set clear rules for you about using alcohol and drugs?	○	○	○	○	○
12. Do your parents punish you when you break the rules about using alcohol and drugs?	○	○	○	○	○
13. Have you been in trouble with the police?	○	○	○	○	○
14. Do you take part in gang activities?	○	○	○	○	○
15. Have you ever thought about committing suicide?	○	○	○	○	○
16. Do your friends use tobacco (cigarettes, etc.)?	○	○	○	○	○
17. Do your friends use alcohol (beer, liquor, etc.)?	○	○	○	○	○
18. Do your friends use marijuana (weed, chronic, dank, kush, etc.)?	○	○	○	○	○
19. In the past 3 months, have you been at a party where alcohol was available?	○	○	○	○	○
20. In the past 3 months, have you been at a party where marijuana or other illicit drugs were available?	○	○	○	○	○
21. In the past 3 months, have you been at a party where prescription drugs, not prescribed to you, were available?	○	○	○	○	○
22. In general, how often do you experience stress in your daily life?	○	○	○	○	○

	YES	NO
23. Does your school ask any students to take a drug test?	○	○
24. Have you bought or sold drugs AT school?	○	○
25. Have you bought or sold drugs when NOT at school?	○	○
26. Have you carried a gun for protection or as a weapon when AT school in the past year?	○	○
27. Have you carried a gun for protection or as a weapon when NOT at school in the past year?	○	○
28. I did not go to school 1 or more days because I felt unsafe at school.	○	○
29. I did not go to school 1 or more days because I felt unsafe on my way to or from school.	○	○
30. Are you aware of a drug prevention coalition in your neighborhood?	○	○
31. Are you involved in an extracurricular activity where the primary purpose of the group is to organize activities around the prevention of drug and alcohol use in your community?	○	○

32. Within the past year, as a result of drinking, I did something I later regretted.
- ○ Yes
- ○ No
- ○ I do not drink

33. On an average school day, how often do you play video or computer games or use a device for something that is not school work?
(Count time spent on things such as xbox, wii, tablets and smartphones)
- ○ Never
- ○ Seldom
- ○ Sometimes
- ○ Often
- ○ A Lot

34. In the past 3 months, how often have you seen or heard anti-drug messages? (TV, Radio, Internet, Social Media Sites, Billboards, Movie Theaters)
- ○ Never
- ○ Once/month
- ○ 1-3 times/month
- ○ 1-3 times/week

35. How many days have you been absent from school this year?

- ◯ None
- ◯ 1-2 days
- ◯ 3-5 days
- ◯ 6-10 days
- ◯ More than 10 days

III. WITHIN THE PAST YEAR HOW OFTEN HAVE YOU...

	DOES NOT APPLY	ONCE/YEAR	6 TIMES/YEAR	ONCE/MONTH	TWICE/MONTH	ONCE/WEEK	3 TIMES/WEEK	EVERY DAY
1. Smoked cigarettes?	◯	◯	◯	◯	◯	◯	◯	◯
2. Used smokeless tobacco (chew, etc.)?	◯	◯	◯	◯	◯	◯	◯	◯
3. Smoked cigars?	◯	◯	◯	◯	◯	◯	◯	◯
4. Used an electronic vapor product? (e-cigars, e-cigarettes, e-pipes, vape pipes, vaping pens, e-hookahs, hookah pens, etc)	◯	◯	◯	◯	◯	◯	◯	◯
5. Drank beer?	◯	◯	◯	◯	◯	◯	◯	◯
6. Drank coolers, hard lemonade, etc.?	◯	◯	◯	◯	◯	◯	◯	◯
7. Drank liquor? (whiskey, vodka, rum, etc.)	◯	◯	◯	◯	◯	◯	◯	◯
8. Had 5 or more glasses of beer, coolers or shots of liquor within a few hours?	◯	◯	◯	◯	◯	◯	◯	◯
9. Smoked marijuana? (weed, chronic, dank, kush, etc.)	◯	◯	◯	◯	◯	◯	◯	◯
10. Used synthetic marijuana? (K2, spice)	◯	◯	◯	◯	◯	◯	◯	◯
11. Used chemical products to get high? (bath salts)	◯	◯	◯	◯	◯	◯	◯	◯
12. Used pain medication not prescribed to you? (Oxycontin, Vicodin, Percocet, etc.)	◯	◯	◯	◯	◯	◯	◯	◯
13. Used stimulant medication not prescribed to you? (Adderall, Ritalin, Concerta, etc.)	◯	◯	◯	◯	◯	◯	◯	◯
14. Used sleeping medication not prescribed to you? (Ambien, Restoril, etc.)	◯	◯	◯	◯	◯	◯	◯	◯
15. Used sedative/anxiety medication not prescribed to you? (Xanax, Valium, Ativan, etc.)?	◯	◯	◯	◯	◯	◯	◯	◯
16. Used over-the-counter drugs to get high?	◯	◯	◯	◯	◯	◯	◯	◯
17. Used heroin?	◯	◯	◯	◯	◯	◯	◯	◯
18. Used cocaine (crack, etc.)?	◯	◯	◯	◯	◯	◯	◯	◯
19. Used inhalants (glue, gas, etc.)?	◯	◯	◯	◯	◯	◯	◯	◯
20. Used hallucinogens (PCP, LSD, etc.)?	◯	◯	◯	◯	◯	◯	◯	◯
21. Used steroids?	◯	◯	◯	◯	◯	◯	◯	◯
22. Used ecstasy (MDMA)?	◯	◯	◯	◯	◯	◯	◯	◯
23. Used meth (crystal, ice, crank, etc.)?	◯	◯	◯	◯	◯	◯	◯	◯
24. Ridden in a car with a driver who was drunk?	◯	◯	◯	◯	◯	◯	◯	◯
25. Ridden in a car with a driver who was high?	◯	◯	◯	◯	◯	◯	◯	◯
26. Driven a car while drunk?	◯	◯	◯	◯	◯	◯	◯	◯
27. Driven a car while high?	◯	◯	◯	◯	◯	◯	◯	◯

IV. WHAT EFFECT DO YOU MOST OFTEN GET WHEN YOU...

	DO NOT USE	NO HIGH	A LITTLE HIGH	VERY HIGH	BOMBED/STONED
1. Drink beer?	◯	◯	◯	◯	◯
2. Drink coolers, hard lemonade, etc.?	◯	◯	◯	◯	◯
3. Drink liquor?	◯	◯	◯	◯	◯
4. Use an electronic vapor product?	◯	◯	◯	◯	◯
5. Smoke marijuana?	◯	◯	◯	◯	◯
6. Use prescription drugs not prescribed to you?	◯	◯	◯	◯	◯
7. Use other illicit drugs?	◯	◯	◯	◯	◯

V. DURING THE PAST 30 DAYS

	YES	NO
1. Did you drink one or more drinks of an alcoholic beverage?	◯	◯
2. Did you smoke part or all of a cigarette?	◯	◯
3. Have you used marijuana or hashish?	◯	◯
4. Have you used prescription drugs not prescribed to you?	◯	◯
5. Have you used an electronic vapor product?	◯	◯
6. Have you used other illicit drugs?	◯	◯

VI. DO YOU FEEL THE FOLLOWING ARE HARMFUL TO YOUR HEALTH?

	NO HARM	SOME HARM	HARMFUL	VERY HARMFUL
1. Smoking cigarettes?	◯	◯	◯	◯
2. Using smokeless tobacco?	◯	◯	◯	◯
3. Smoking cigars?	◯	◯	◯	◯
4. Using an electronic vapor product?	◯	◯	◯	◯
5. Drinking beer?	◯	◯	◯	◯
6. Drinking coolers, hard lemonade, etc.?	◯	◯	◯	◯
7. Drinking liquor?	◯	◯	◯	◯
8. Smoking marijuana?	◯	◯	◯	◯
9. Using synthetic marijuana?	◯	◯	◯	◯
10. Using chemical products to get high? (bath salts)	◯	◯	◯	◯
11. Using prescription drugs not prescribed to you?	◯	◯	◯	◯
12. Using over-the-counter drugs to get high?	◯	◯	◯	◯
13. Using heroin?	◯	◯	◯	◯
14. Using cocaine?	◯	◯	◯	◯
15. Using inhalants?	◯	◯	◯	◯
16. Using hallucinogens?	◯	◯	◯	◯
17. Using steroids?	◯	◯	◯	◯
18. Using ecstasy?	◯	◯	◯	◯
19. Using meth?	◯	◯	◯	◯

VII. HOW MUCH DO YOU THINK PEOPLE RISK HARMING THEMSELVES PHYSICALLY OR IN OTHER WAYS IF THEY...

	NO RISK	SLIGHT RISK	MODERATE RISK	GREAT RISK
1. Use any alcohol?	◯	◯	◯	◯
2. Have five or more drinks of an alcoholic beverage once or twice a week?	◯	◯	◯	◯
3. Take one or two drinks of an alcoholic beverage nearly every day?	◯	◯	◯	◯
4. Use any tobacco?	◯	◯	◯	◯
5. Smoke one or more packs of cigarettes per day?	◯	◯	◯	◯
6. Use an electronic vapor product?	◯	◯	◯	◯
7. Smoke marijuana once or twice a week?	◯	◯	◯	◯
8. Use prescription drugs that are not prescribed to them?	◯	◯	◯	◯
9. Use illicit drugs?	◯	◯	◯	◯
10. Drive while drunk?	◯	◯	◯	◯
11. Drive while high?	◯	◯	◯	◯

PLEASE DO NOT WRITE IN THIS AREA

VIII. HOW EASY IS IT TO GET...

	DON'T KNOW/CAN'T GET	VERY DIFFICULT	FAIRLY DIFFICULT	FAIRLY EASY	VERY EASY
1. Cigarettes, smokeless tobacco, cigars, etc.?	○	○	○	○	○
2. Electronic vapor products?	○	○	○	○	○
3. Beer, wine, liquor and other alcohol products?	○	○	○	○	○
4. Marijuana?	○	○	○	○	○
5. Prescription drugs not prescribed to you?	○	○	○	○	○
6. Other illicit drugs?	○	○	○	○	○

IX. HOW DO YOU FEEL ABOUT SOMEONE YOUR AGE HAVING ONE OR TWO DRINKS OF AN ALCOHOLIC BEVERAGE NEARLY EVERY DAY?

- ○ Neither approve nor disapprove
- ○ Somewhat disapprove
- ○ Strongly disapprove
- ○ Don't know or can't say

X. HOW WRONG DO YOUR *FRIENDS* FEEL IT WOULD BE FOR YOU TO...

	NOT AT ALL WRONG	A LITTLE BIT WRONG	WRONG	VERY WRONG
1. Have one or two drinks of an alcoholic beverage nearly every day?	○	○	○	○
2. Use any alcohol?	○	○	○	○
3. Use any tobacco?	○	○	○	○
4. Smoke tobacco?	○	○	○	○
5. Use electronic vapor products?	○	○	○	○
6. Smoke marijuana?	○	○	○	○
7. Use prescription drugs not prescribed to you?	○	○	○	○
8. Use other illicit drugs?	○	○	○	○
9. Gamble anything of value?	○	○	○	○

XI. HOW WRONG DO YOUR *PARENTS* FEEL IT WOULD BE FOR YOU TO...

	NOT AT ALL WRONG	A LITTLE BIT WRONG	WRONG	VERY WRONG
1. Have one or two drinks of an alcoholic beverage nearly every day?	○	○	○	○
2. Use any alcohol?	○	○	○	○
3. Use any tobacco?	○	○	○	○
4. Smoke tobacco?	○	○	○	○
5. Use electronic vapor products?	○	○	○	○
6. Smoke marijuana?	○	○	○	○
7. Use prescription drugs not prescribed to you?	○	○	○	○
8. Use other illicit drugs?	○	○	○	○
9. Gamble anything of value?	○	○	○	○

XII. FROM WHOM DO YOU GET...

(mark all that apply)

	DO NOT USE	FRIEND	PARENT	SIBLING	STORE	INTERNET	OTHER
1. Alcohol?	○	○	○	○	○	○	○
2. Tobacco?	○	○	○	○	○	○	○
3. Electronic vapor products?	○	○	○	○	○	○	○
4. Marijuana?	○	○	○	○	○	○	○
5. Prescription drugs not prescribed to you?	○	○	○	○	○	○	○
6. Illicit drugs?	○	○	○	○	○	○	○

XIII. AT WHAT AGE DID YOU FIRST...

	NEVER USED	10 OR UNDER	11	12	13	14	15	16	17 OR OLDER
1. Smoke cigarettes?	○	○	○	○	○	○	○	○	○
2. Use smokeless tobacco?	○	○	○	○	○	○	○	○	○
3. Smoke cigars?	○	○	○	○	○	○	○	○	○
4. Use electronic vapor products?	○	○	○	○	○	○	○	○	○
5. Drink beer?	○	○	○	○	○	○	○	○	○
6. Drink coolers, hard lemonade, etc.?	○	○	○	○	○	○	○	○	○
7. Drink liquor?	○	○	○	○	○	○	○	○	○
8. Smoke marijuana?	○	○	○	○	○	○	○	○	○
9. Use synthetic marijuana?	○	○	○	○	○	○	○	○	○
10. Use chemical products to get high? (bath salts)	○	○	○	○	○	○	○	○	○
11. Use prescription drugs not prescribed to you?	○	○	○	○	○	○	○	○	○
12. Use over-the-counter drugs to get high?	○	○	○	○	○	○	○	○	○
13. Use heroin?	○	○	○	○	○	○	○	○	○
14. Use cocaine?	○	○	○	○	○	○	○	○	○
15. Use inhalants?	○	○	○	○	○	○	○	○	○
16. Use hallucinogens?	○	○	○	○	○	○	○	○	○
17. Use steroids?	○	○	○	○	○	○	○	○	○
18. Use ecstasy?	○	○	○	○	○	○	○	○	○
19. Use meth?	○	○	○	○	○	○	○	○	○

XIV. WHERE DO YOU USUALLY...

(You may mark more than 1 response for each question)

	DO NOT USE	AT HOME	AT SCHOOL	IN A CAR	FRIEND'S HOUSE	PARTIES	OTHER
1. Smoke cigarettes?	○	○	○	○	○	○	○
2. Use smokeless tobacco?	○	○	○	○	○	○	○
3. Smoke cigars?	○	○	○	○	○	○	○
4. Use electronic vapor products?	○	○	○	○	○	○	○
5. Drink beer?	○	○	○	○	○	○	○
6. Drink coolers, hard lemonade, etc.?	○	○	○	○	○	○	○
7. Drink liquor?	○	○	○	○	○	○	○
8. Smoke marijuana?	○	○	○	○	○	○	○
9. Use synthetic marijuana?	○	○	○	○	○	○	○
10. Use chemical products to get high? (bath salts)	○	○	○	○	○	○	○
11. Use prescription drugs not prescribed to you?	○	○	○	○	○	○	○
12. Use over-the-counter drugs to get high?	○	○	○	○	○	○	○
13. Use heroin?	○	○	○	○	○	○	○
14. Use cocaine?	○	○	○	○	○	○	○
15. Use inhalants?	○	○	○	○	○	○	○
16. Use hallucinogens?	○	○	○	○	○	○	○
17. Use steroids?	○	○	○	○	○	○	○
18. Use ecstasy?	○	○	○	○	○	○	○
19. Use meth?	○	○	○	○	○	○	○

PLEASE DO NOT WRITE IN THIS AREA

XV. WHEN DO YOU USUALLY...

(You may mark more than 1 response for each question)

	DO NOT USE	BEFORE SCHOOL	DURING SCHOOL	AFTER SCHOOL	WEEK NIGHTS	WEEKENDS
1. Smoke cigarettes?	○	○	○	○	○	○
2. Use smokeless tobacco?	○	○	○	○	○	○
3. Smoke cigars?	○	○	○	○	○	○
4. Use electronic vapor products?	○	○	○	○	○	○
5. Drink beer?	○	○	○	○	○	○
6. Drink coolers, hard lemonade, etc.?	○	○	○	○	○	○
7. Drink liquor?	○	○	○	○	○	○
8. Smoke marijuana?	○	○	○	○	○	○
9. Use synthetic marijuana?	○	○	○	○	○	○
10. Use chemical products to get high? (bath salts)	○	○	○	○	○	○
11. Use prescription drugs not prescribed to you?	○	○	○	○	○	○
12. Use over-the-counter drugs to get high?	○	○	○	○	○	○
13. Use heroin?	○	○	○	○	○	○
14. Use cocaine?	○	○	○	○	○	○
15. Use inhalants?	○	○	○	○	○	○
16. Use hallucinogens?	○	○	○	○	○	○
17. Use steroids?	○	○	○	○	○	○
18. Use ecstasy?	○	○	○	○	○	○
19. Use meth?	○	○	○	○	○	○

XVI. GAMBLING

Gambling involves betting anything of value (money, watch, soda, etc.) on a game or event.

WITHIN THE PAST YEAR HOW OFTEN HAVE YOU...

	DID NOT USE	ONCE/YEAR	6 TIMES/YEAR	ONCE/MONTH	TWICE/MONTH	ONCE/WEEK	3 TIMES/WEEK	EVERY DAY
1. Played "scratch offs"?	○	○	○	○	○	○	○	○
2. Played lottery tickets (Powerball or Megabucks)?	○	○	○	○	○	○	○	○
3. Played pull tabs or "paper" games other than lotteries?	○	○	○	○	○	○	○	○
4. Played dice or coin flips?	○	○	○	○	○	○	○	○
5. Played cards (poker, etc.)?	○	○	○	○	○	○	○	○
6. Bet on a sport?	○	○	○	○	○	○	○	○
7. Bet on a horse/dog race?	○	○	○	○	○	○	○	○
8. Bet on games of personal skill (bowling, video games, dares, etc.)?	○	○	○	○	○	○	○	○
9. Played bingo for money?	○	○	○	○	○	○	○	○
10. Bet money over the internet?	○	○	○	○	○	○	○	○
11. Bet money in other ways?	○	○	○	○	○	○	○	○

12. Where do you usually gamble? (mark all that apply)

- ○ Internet
- ○ Casino
- ○ Harness racing
- ○ My home
- ○ Sporting event
- ○ School property
- ○ Community festival, concert or other event
- ○ Another person's home
- ○ Neighorhood store or convenience store
- ○ Park, parking lot, or other public place
- ○ Other place
- ○ I have not gambled

HAVE YOU EVER...

	I HAVE NOT GAMBLED	NEVER	SELDOM	SOMETIMES	OFTEN	A LOT
13. Felt bad about the amount you bet, or about what happens when you bet money?	○	○	○	○	○	○
14. Felt that you would like to stop betting money but didn't think you could?	○	○	○	○	○	○
15. Lied to anyone about betting or gambling?	○	○	○	○	○	○
16. Bet or gambled more than you wanted?	○	○	○	○	○	○

XVII. WHILE AT SCHOOL IN THE PAST YEAR HAVE YOU...

	NEVER	ONE TIME	2-5 TIMES	6 OR MORE TIMES
1. Carried a handgun?	○	○	○	○
2. Carried a knife, club or other weapon?	○	○	○	○
3. Threatened a student with a handgun, knife or club?	○	○	○	○
4. Threatened to hurt a student by hitting, slapping or kicking?	○	○	○	○
5. Hurt a student by using a handgun, knife or club?	○	○	○	○
6. Hurt a student by hitting, slapping or kicking?	○	○	○	○
7. Been threatened with a handgun, knife or club by a student?	○	○	○	○
8. Had a student threaten to hit, slap or kick you?	○	○	○	○
9. Been afraid a student may hurt you?	○	○	○	○
10. Been hurt by a student using a handgun, knife or club?	○	○	○	○
11. Been hurt by a student who hit, slapped, or kicked you?	○	○	○	○

XVIII. IN MY SCHOOL, I FEEL SAFE...

	NEVER	SELDOM	SOMETIMES	OFTEN	A LOT
1. In the classroom	○	○	○	○	○
2. In the cafeteria (lunchroom)	○	○	○	○	○
3. In the halls	○	○	○	○	○
4. In the bathroom	○	○	○	○	○
5. In the gym	○	○	○	○	○
6. On the school bus	○	○	○	○	○
7. At school events (ballgames, etc.)	○	○	○	○	○
8. In the parking lot	○	○	○	○	○

XIX. DURING THE PAST 7 DAYS, HOW MANY DAYS DID YOU...

	0 DAYS	1-3 DAYS	4-6 DAYS	7 DAYS
1. Exercise, play a sport, or participate in a physical activity for at least 20 minutes that made you sweat and breathe hard?	○	○	○	○
2. Eat at least one piece of fruit?	○	○	○	○
3. Eat at least one vegetable?	○	○	○	○

XX. ON AN AVERAGE SCHOOL NIGHT, HOW MANY HOURS OF SLEEP DO YOU GET?

- ○ 4 or less hours
- ○ 5 hours
- ○ 6 hours
- ○ 7 hours
- ○ 8 hours
- ○ 9 hours
- ○ 10 or more hours

THANK YOU FOR YOUR PARTICIPATION

2017 Red Ribbon Week Youth Summit

Group Discussion Guide

Directions:

Please spend 60 minutes collecting answers for these questions. Please spend no more than 5 minutes discussing each question.

Encourage students to be specific about their responses and definitions.

Please select ONE student to serve as the note taker. There is a Student Guide to be used to take notes for each of these questions.

Part 1 Questions-Overview of Substance Usage
1. Why do you think teens use substances? (Examples: alcohol, marijuana, prescription drugs, vapor pens, tobacco)
2. Where do teens get substances? (**Prompt with** such as Alcohol? Then ask Prescription Drugs without a prescription? E-Cigarettes? (Please give a few examples of prescription drugs (Vicodin, Ritalin, Adderall, or Xanax)).
3. What substances do you see your peers (not necessarily friends) using the most and why? (**Prompt with** "Tell me more." "Does anyone have anything else to add?) • Have them rank these 4 substances in terms of most used to least used. Alcohol, electronic vapor pens, marijuana.
4. Where do your peers get vaping products? (**Prompt with** "Some examples are vape pens, e-cigarettes") Are vaping products more or less harmful than cigarettes? (**Prompt with** "Why do you think that is?")
5. What kinds of consequences have you seen a friend or classmate suffer as a result of alcohol or drug use?
Part 2 Questions-Overview of gambling
1. Where do teens usually gamble? (**Prompt with** giving examples such as, internet, casino, at home, another's home, festival, school, sporting event)
2. What activity do you consider gambling? At what point would you consider it to problem gambling? (Prompt with Scratch offs, Lottery, Casinos)
Part 3 Questions- Overview of Monitoring:
1. How important do you feel it is for families to lock up prescription medications?
2. Do you feel your school places a priority on enforcing policies on smokeless tobacco or e-vapor?
Part 4 - What's the Solution?
1. What factors in a teens life influence alcohol and other drug use?
2. What factors in your life influence you to not use drugs & alcohol?
3. As adults, what could we do to influence teens to stay drug free?