

2017

The Status of Youth Tobacco

PIMA COUNTY



Tobacco and Chronic Disease Unit



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Executive Summary

The Pima County Tobacco and Chronic Disease Prevention Unit is dedicated to addressing tobacco addiction, prevention and education. The Unit is focused on addressing tobacco program needs while building the capacity to enhance current services as they relate to targeting tobacco initiation and abuse.

The intent of this report is to provide data with an assessment that reflects the multiple youth tobacco issues that exist in Pima County.

To address these issues, the report highlights effective tobacco control methods to reduce youth initiation and health risks. It is Pima County Health Department's duty to diligently address tobacco issues in a meaningful way. **In doing so, the Unit created this document so that it may be used by community leaders, partners and colleagues in support of cohesive community health initiatives and policies that protect our youth from the harms of nicotine addiction.**

Methodology

The Pima County Status on Youth Tobacco Report introduces the collection and analysis of data from local, state and national sources, including the Arizona Youth Survey, as well as quantitative feedback, observations and professional references. In addition, the Tobacco and Chronic Disease Prevention Unit has integrated an examination of data and field observations collected from the Point of Sale Advertising Field Survey implemented in Pima County.

The Arizona Youth Survey is designed to assess and review recognized Risk and Protective Factors that are associated with certain risky behaviors for youth, including substance use. The Arizona Criminal Justice Statistical Analysis Center conducts the AYS every two years as a part of a multi-agency and community partner effort. During each administrative year, Arizona 8th, 10th and 12th grade students in all 15 counties have the opportunity to participate and respond as associated with their local school.

Introduction

Adolescence is a difficult time, particularly for those who begin using addictive substances. It can be a time when impulsive decisions and choices have serious, even fatal, consequences. Although many Arizona youth perceive risk in smoking, several underestimate the addictiveness of nicotine and discount lifelong health effects of tobacco use. Youth tobacco use and prevention issues are not simple public health problems to solve and are much more complex than one might expect. To understand the influences of tobacco on youth and its harmful effects, it is essential to appreciate that tobacco issues cannot be compartmentalized into specific areas with defined, absolute solutions. **The ability to gather granular data at the County level can be difficult, but by utilizing what local data is available, along with studying national and state research and trends, we have a strong understanding of the status of youth tobacco in regards to initiation, use, perception and disclosure.** The Health Department is committed to applying best practices and evidence-based approaches in reducing youth tobacco use and addiction through strategies that focus on education, reducing environmental exposures, and limiting access.

Background

Recent national and state surveys indicate that Arizona witnessed a decline of 40,000 adult smokers over the past year, with a reduction of 13,000 high school aged youth using tobacco. As a result, Arizonans observed a cost burden relief of more than \$250 million in 2015, which is directly related to the reduction in tobacco use (Arizona Department of Health Services, 2015). **The successes over the past year has been attributed to local community and government organizations working together to implement policies that protect residents from the initiation of and exposure to tobacco.**

Various communities in Arizona have adopted tobacco-free public space policies with density and proximity restrictions. Additionally, there has been a movement throughout Arizona for municipalities to consider raising the age of tobacco purchase from 18 to 21. In addition to Pima County, Coconino and Maricopa Counties have reviewed and discussed point of sale ordinances that include tobacco retail licensing and enforcement.

Although we have seen an overall decline of tobacco use in Arizona, it is still estimated that 4,300 youth under 18 years of age will become new smokers per year (Campaign for Tobacco-Free Kids, 2015). Currently, Pima County's youth tobacco use prevalence figure surpasses that of the state; 31% and 28.8% respectively (Arizona Department of Health Services, 2014). In addition, Arizona Attorney General's tobacco retailer inspection records show that over the last four years, Pima County has seen a 16.5% increase in tobacco sales to minors with the largest annual increase occurring this past year.

In 2015, sales to minors under the age of 18 increased from 12% in 2014 to a current overall fail rate of 21.5%. The first indications of this growing trend appeared in 2013 when tobacco retail sales to minors shot up after steady years of decline.

There has also been a significant influx with the popularity and trend of Electronic Nicotine Delivery Systems (ENDS) and other alternative forms of tobacco, especially with the youth population. Despite limited access to data and research on the negative effects of ENDS, **there is solid evidence of the effects of nicotine which makes the use of e-cigarettes a growing health concern in addition to traditional tobacco.**



Youth Tobacco Initiation

According to the Surgeon General, youth are more sensitive to nicotine and can feel dependent earlier than adults. Even if they intend to quit after initiation, about three out of four adolescent smokers end up smoking as grownups. Many adolescents who begin smoking are also potentially exposing their peers to second hand smoke.

Key Points

- *The average age of tobacco initiation in Pima County is 13.1 years old. Compared to other counties, Pima County youth initiate tobacco use at a slightly older age*
- *Historically, females and non-Hispanic youth tend to initiate tobacco use at a slightly older age*
- *American Indians appear to initiate tobacco use at a younger age than other racial ethnic groups*
- *Since 2004, there has been a trend toward later age of initiation by 12th graders. This trend has not been seen among 6th and 8th graders*

Nicotine affects a youth's brain differently than that of an adult, and initiation with addiction is more likely in the adolescent population because their brains are still developing. Nearly 90% of adult smokers started before the age of 18 and 99% before the age of 26 (Centers for Disease Control and Prevention, 2015).

“The developing brain is highly sensitive to the addictive properties of nicotine. Many teens show signs of addiction even at low levels of tobacco use. Exposure to nicotine during adolescence may alter brain development, *rewiring the brain for addiction*” (National Institute of Health).

Figure 1

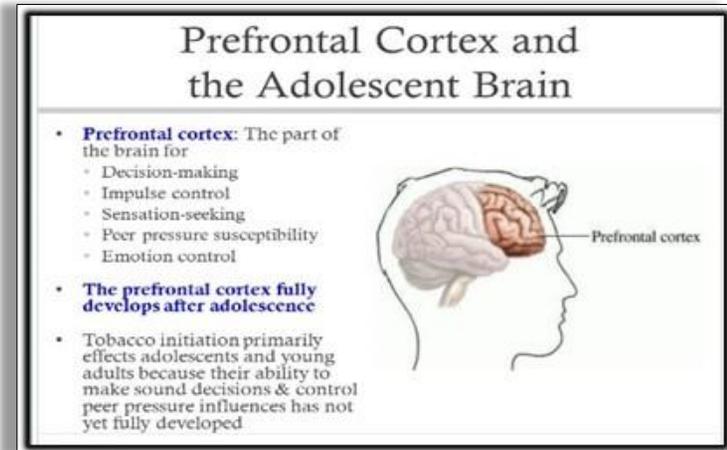


Figure 2

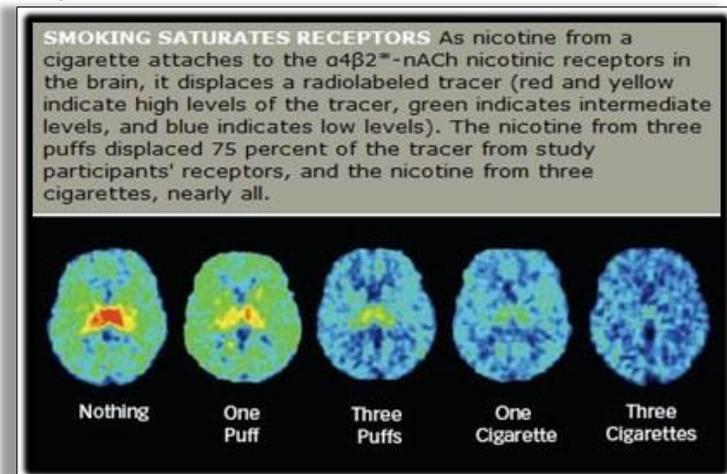


Chart 1

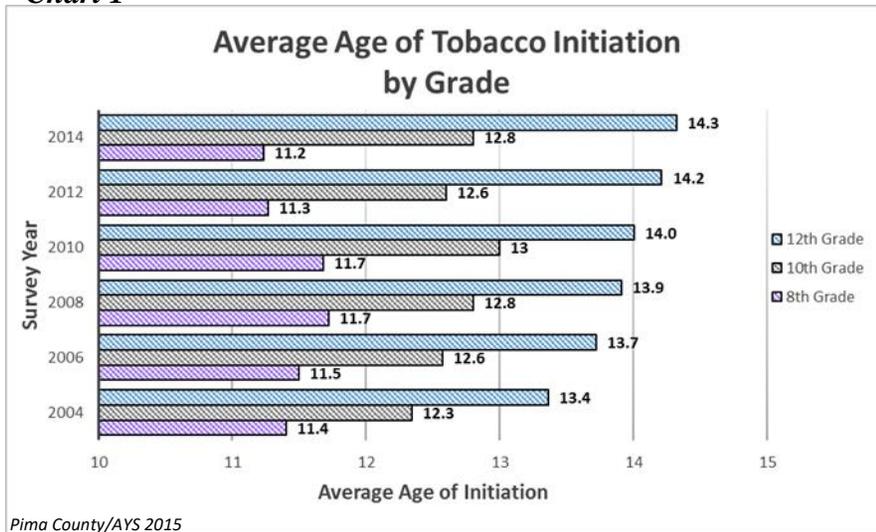


Chart 3

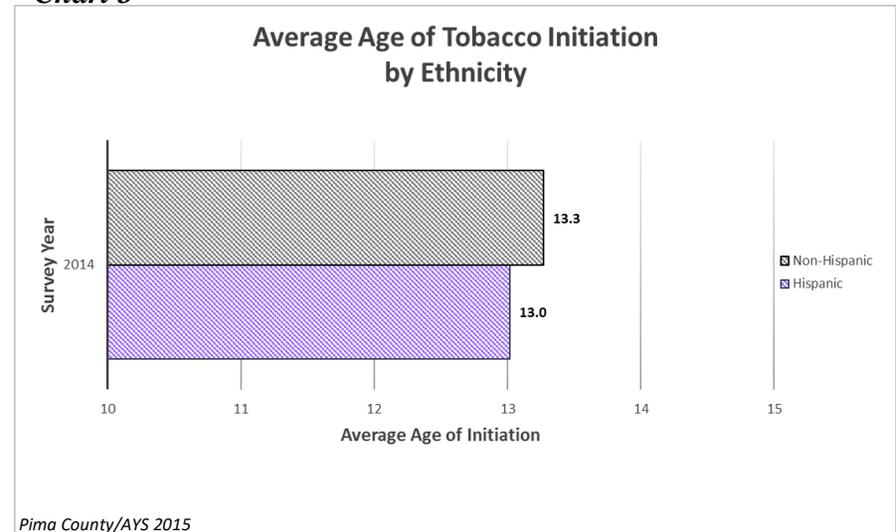


Chart 2

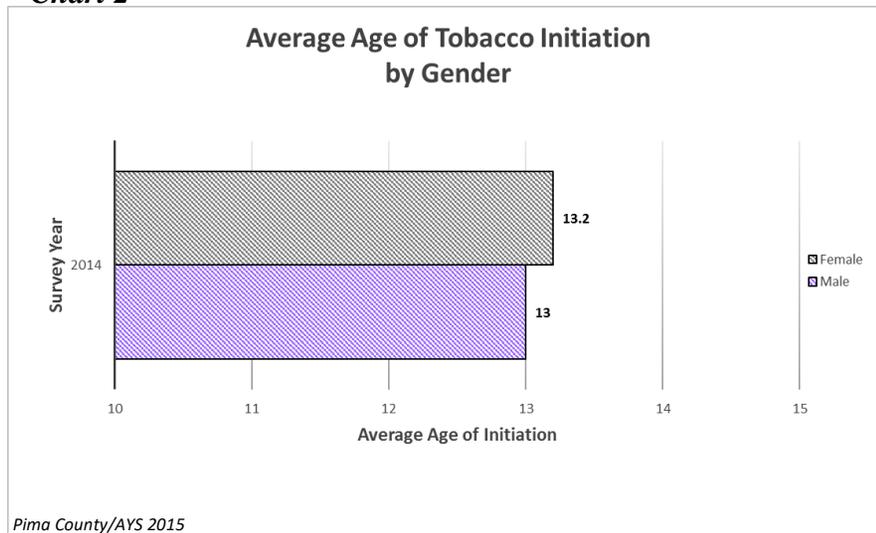
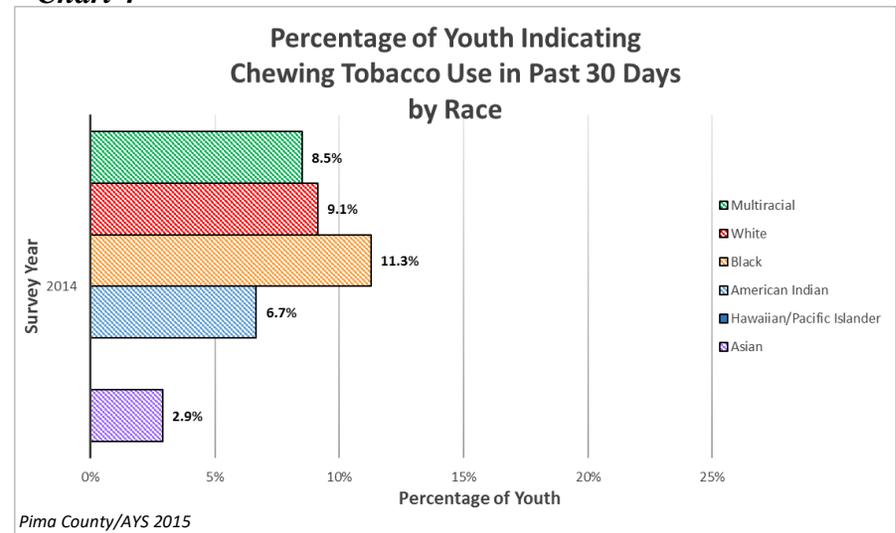


Chart 4



Youth Tobacco Use

Youth Cigarette Use

More than 60,000 youth, 29.3% in Pima County, have smoked a cigarette in their lifetime. **It's estimated that 115,000 Arizona**

youth currently under the age of 18 will die prematurely due to smoking. That equates to roughly 1 in every 14 youth reducing their life expectancy by 10 years.

Knowing that Pima County has a higher youth prevalence rate than that of the state, we can predict that we will witness a greater loss of life in Pima County, both in quality and expiration, than our counterparts.

Key Points

- 12% of Pima County youth indicated they smoked a cigarette in the past 30 days, 2.6% more than the state average
- 17% of high school seniors responded that they smoked a cigarette in the past 30 days
- Since 2010, there was a reduction in youth reporting use in the past 30 days. The timing of this decline coincides with an increase in availability of other tobacco products such as e-cigarettes
- 39% of Pima County high school seniors have tried a cigarette at least once in their lifetime

Chart 5

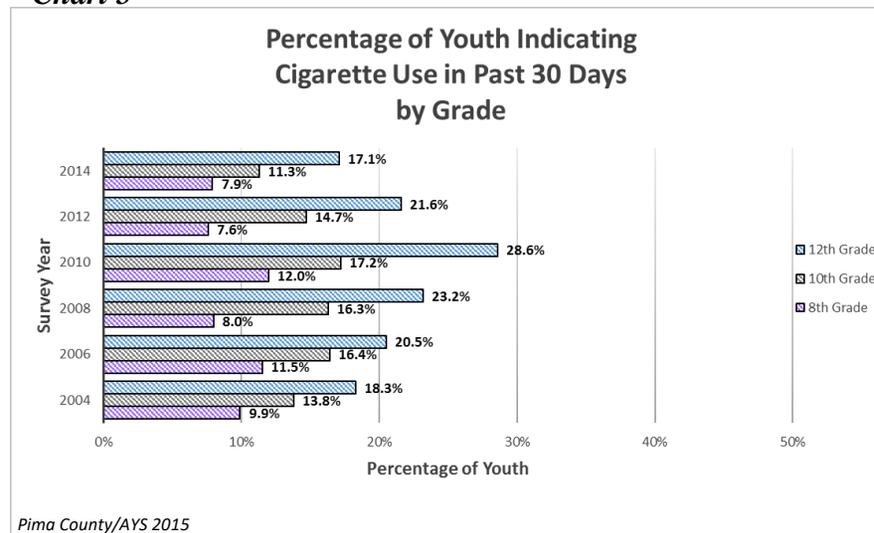
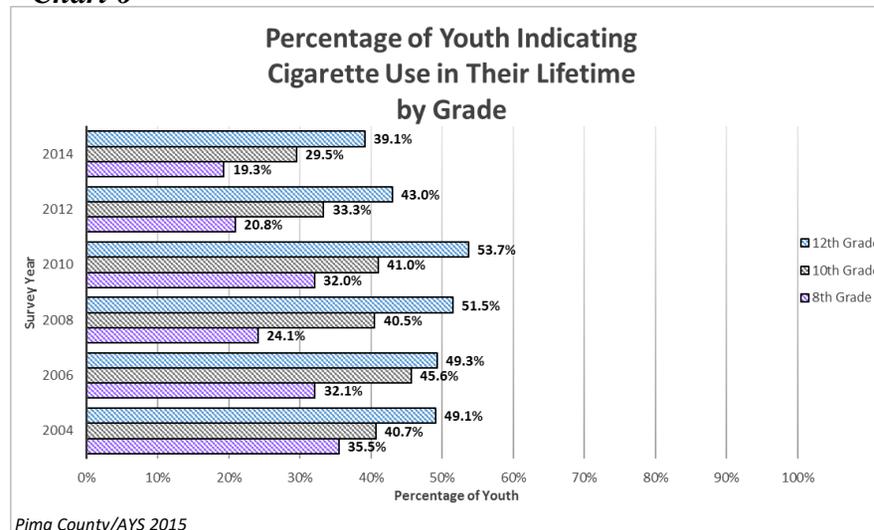


Chart 6



Youth Chew Use

Chewing tobacco, also known as dip, snuff or snus, is not a safe alternative to smoking. Snus and dissolvable tobacco are becoming

Key Points

- 9% of youth reported using chew in the last 30 days
- Chewing tobacco has increased since 2006
- Boys have typically used chewing tobacco more than girls. However, use among girls has more than doubled in the last year
- Chewing tobacco use among Black students nearly tripled between 2012 and 2014

more common as they are aggressively marketed and distributed. When using chew, nicotine is absorbed in the lining of the mouth. The amount of nicotine taken in may vary depending on the physical characteristics of the product, duration of use, and how it is held in or around the mouth. Some chewing tobacco products, especially those that do not require spitting, have a unique appeal to youth. They tend to be more easily concealed and these products are often flavored like candy. As public

smoking bans continue to be implemented across the state, tobacco companies will continue to be interested in these types of methods for tobacco use and delivery to invest and profit from individual tobacco addiction.

Chart 7

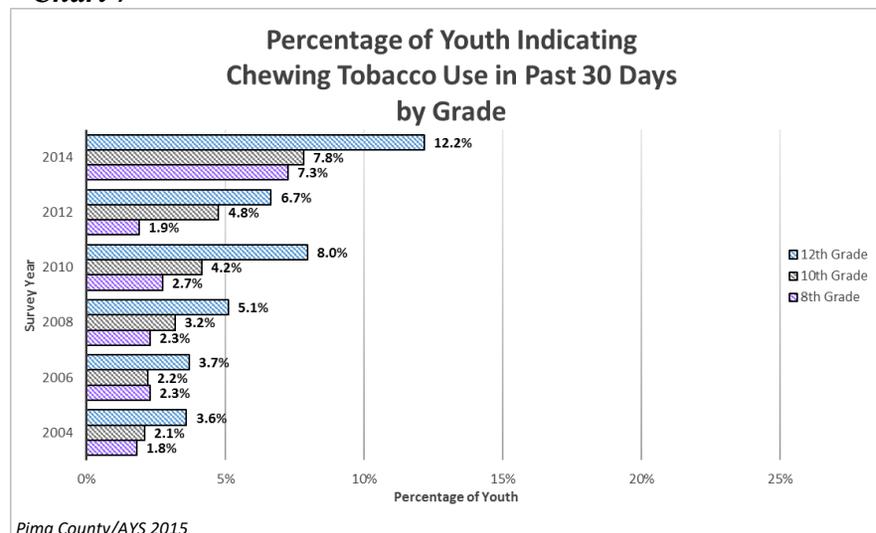
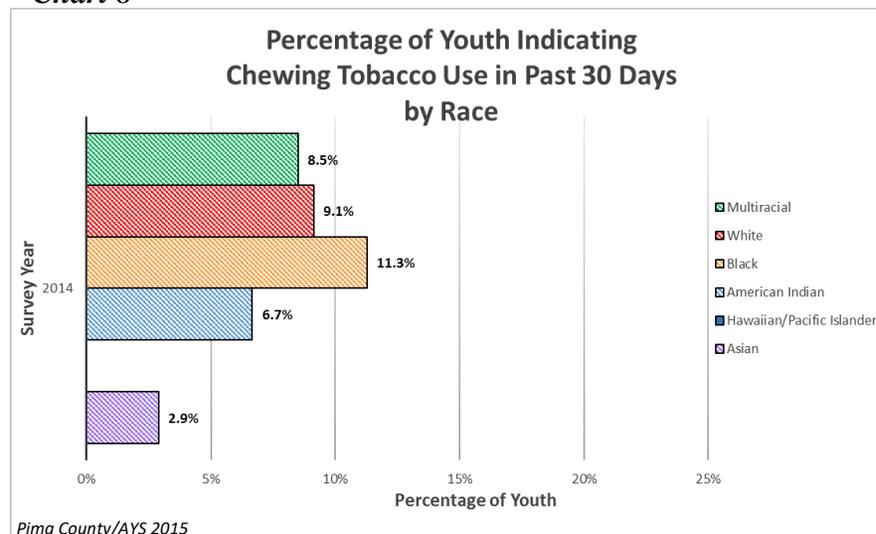


Chart 8



Alternate Forms of Tobacco

“A large portion of kids who use tobacco are smoking products other than cigarettes, including cigars and hookahs, which are similarly dangerous,” according to Tim McAfee, MD, MPH, director of the CDC’s Office on Smoking and Health (Simon, 2013). Often times, tobacco is thought of in its traditional forms: cigarettes, cigars, and snus (oral chew). **Unfortunately, becoming more common among youth are alternative forms of tobacco, including Electronic Nicotine Delivery Systems (ENDS) and hookahs, which are gaining popularity among youth at a staggering rate.**

Electronic Nicotine Delivery Systems (ENDS)

ENDS, more widely referred to as e-cigarettes, e-hookahs, hookah pens, vaporizers, and vape pipes, among other terms, are not necessarily new to the marketplace.

Figure 3



However, communities have seen a significant influx in popularity of the product in recent years, especially within the youth population.

With bright, eye catching colors, and e-juice (nicotine solution) flavors such as gummy bear, cotton candy, bubble gum, and locally produced Egee’s flavors, youth are enticed to experiment with a product marketed as a safe alternative to traditional smoking.

Figure 4



Not enough research has been conducted to determine the true health effects of the product or if it is a safe alternative to traditional smoking, but we do have solid evidence of the adverse effects nicotine has on the adolescent brain.

The ENDS industry continues to employ the same refined, pointed, and expertly placed marketing tactics that have been used for decades to promote traditional tobacco products.

Because of this type of marketing, some youth find themselves believing ENDS are a safe, fun, and trendy accessory that represents who they are or what they like. **This leads to youth neglecting the risks of lifelong addiction and the other potential health dangers that come with any type of nicotine use (E-Cigarette Issues Impacting Public Health, page A1).**

Figure 5



Hookah

Hookah has been around for centuries but recently it has become a new youth favorite. There is no Pima County data on hookah use but

Key Points

- *Hookah smoke is at least as toxic as cigarettes*
- *Hookah smoking sessions may expose a smoker to more smoke over a longer period of time*
- *Due to the method of smoking, including frequency of puffing, depth of inhalation, and length of the smoking, hookah smokers may absorb higher concentrations of the same toxins found in cigarette smoke*
- *Shared hookah mouth pieces can spread diseases such as Herpes and H. pylori along with more common viral infections such as mono, colds, and strep throat*

national numbers show they are increasing in popularity. In 2014, nearly 3 of every 100 US middle school students (2.5%) and more than 9 of every 100 high school students (9.4%) reported they had used hookah in the past 30 days. In 2011, middle school rates were at 1.0% and high school use at 4.1% (CDC, 2015). Due to a strong social aspect, fashionable lounge settings, elaborately decorated pipes, alluring flavors, and a misconception of its safety, hookah smoking has become a fun, hip, youth-attractive activity.

Emerging Products

ENDS and hookahs may appear to be the newest threats in the battle against youth tobacco addiction, but sadly they are not. There are newer products emerging in the marketplace that are just as alluring, addictive and dangerous to youth.

Tobacco companies have started to develop and market test products in the forms of mint-like tablets, toothpick sticks, and dissolvable oral strips. Most of these are designed to dissolve in the user's mouth, and are offered in candy-like flavors, however they all contain potent toxins that can lead to cancer and other serious diseases.

Figure 6



Unfortunately, there is no reliable data on how many adolescents use these newer products, and it is consequently a key area to which Pima County needs to pay particular attention.

Tobacco Accessibility and Sales to Minors

Youth access to tobacco can vary from an underage purchase at a retail outlet to obtaining it from a family member. Each access point a youth is able to exploit is one too many. **A comprehensive approach to reduce access is needed to reduce youth tobacco use and abuse in Pima County.**

Social Sources

There are a variety of social means by which youth obtain tobacco that include sibling and friend sharing, shoplifting, stealing from family members and obtaining half-smoked cigarettes from ashtrays or landscape. Interventions that advocate for parental engagement, landscape policy, and tobacco sale age restrictions are proactive efforts in preventing youth access to tobacco.

Chart 9

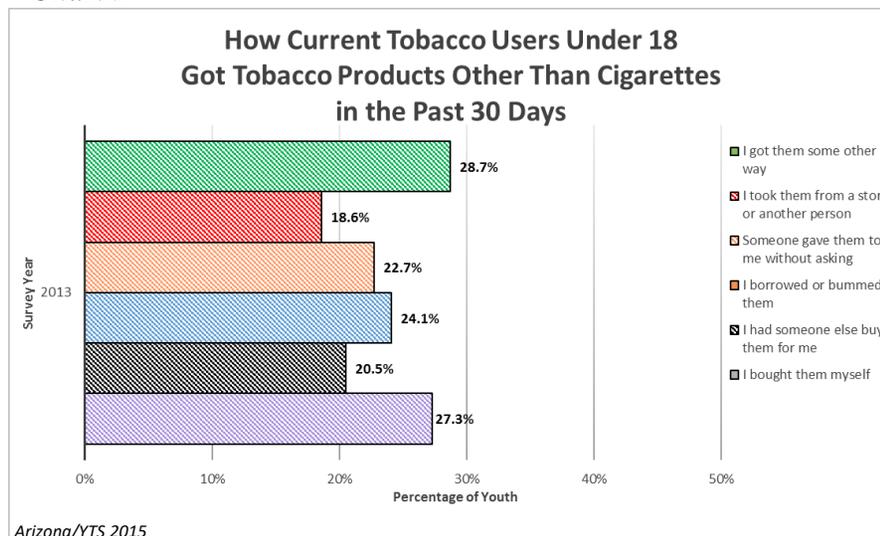


Chart 10

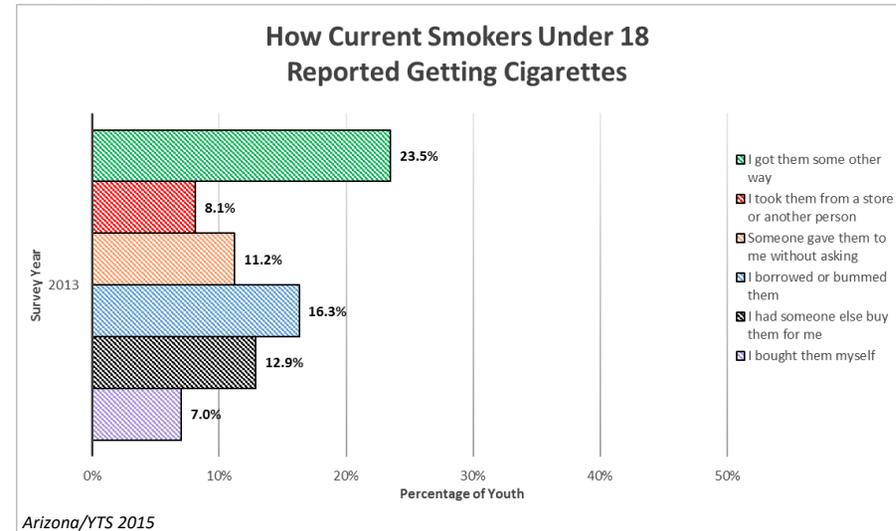
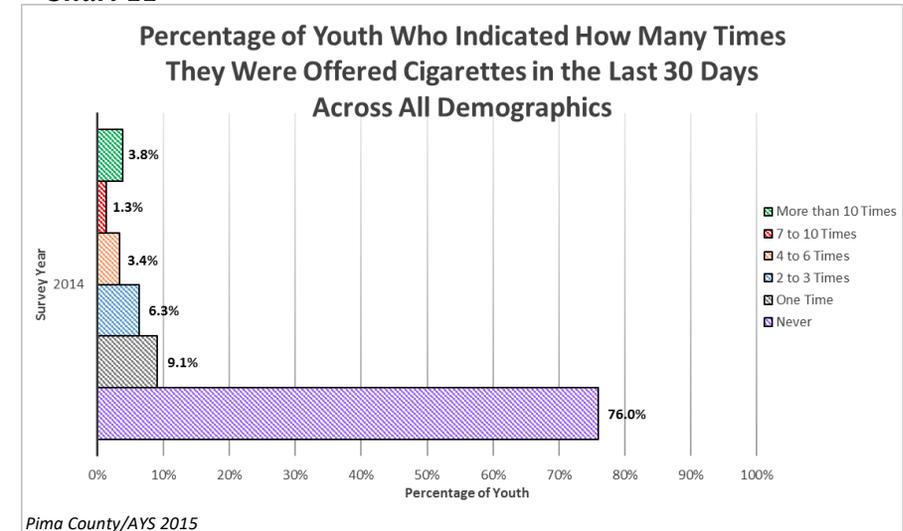


Chart 11



Retail Sources

Tobacco obtained through social sources often occurs and can be difficult to regulate. **However, monitoring tobacco sales to minors in retail venues is extremely important in preventing youth access to tobacco products.** Tobacco retailers are required by state law to verify age and refuse sales to minors under **A.R.S. § 13-3622**, which states “Furnishing of tobacco product, vapor product or tobacco or shisha instruments or paraphernalia to minor; minor accepting or receiving tobacco product, vapor product or tobacco or shisha instruments or paraphernalia; illegally obtaining tobacco product, vapor product or tobacco or shisha instruments or paraphernalia by underage person.”

Key Points

- *In 2015, tobacco sales to minors during compliance checks surpassed 20 % of total inspections*
- *In the past three years, Pima County has seen a significant increase in tobacco sales to minors with the biggest jump between years at 16.5%*
- *State code regulates the sale of tobacco to minors. Pima County has been in the process of reviewing strategies that constructively address tobacco retailing*

Performing retail inspections of tobacco vendors close to schools or neighborhoods on a regular basis is critical. In addition to retail inspections, social support and education for youth, friends and families through community based interventions and messaging is another strategy highly recommended in preventing youth access to tobacco products.

Chart 12

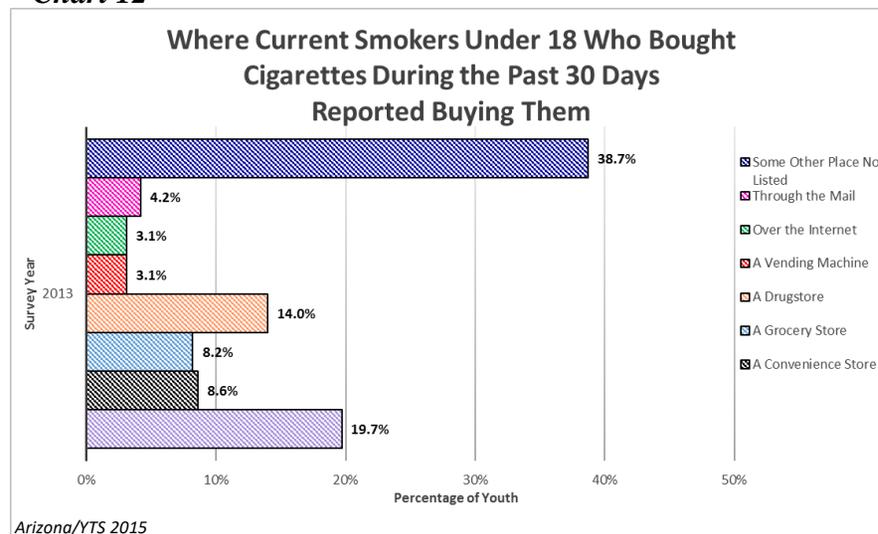
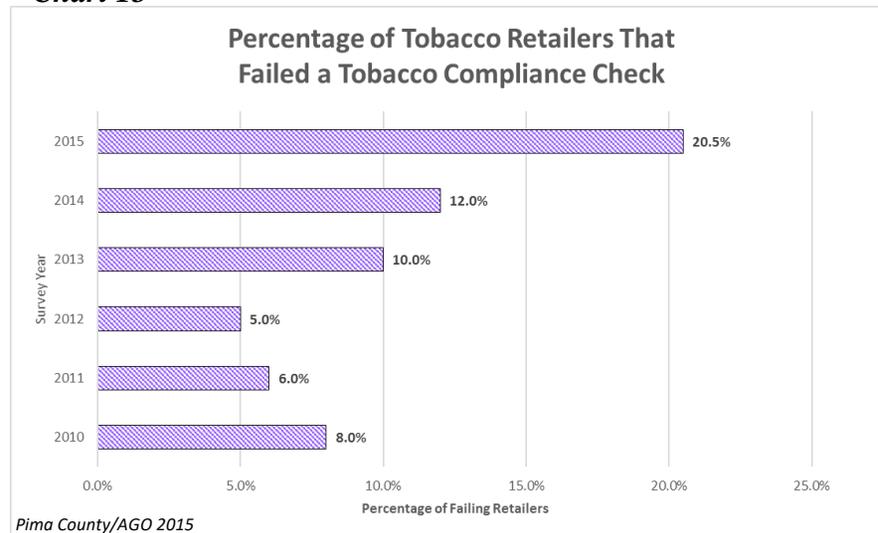
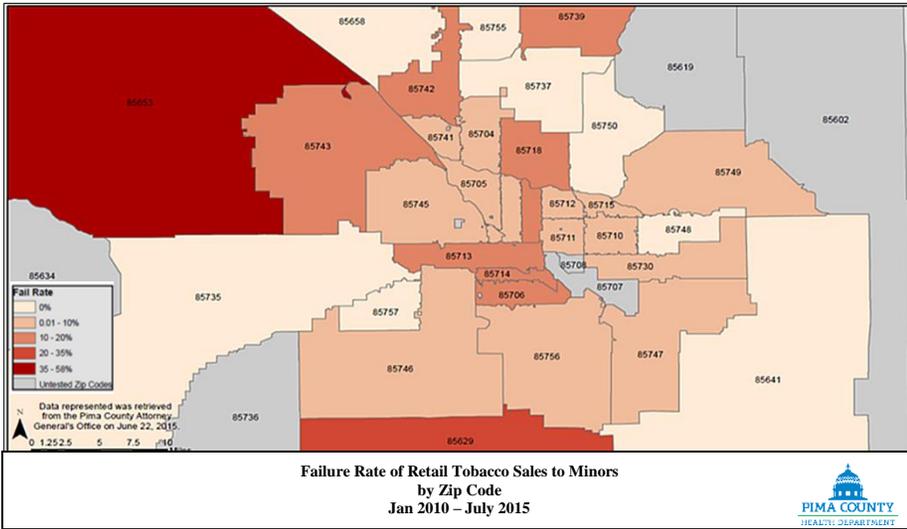


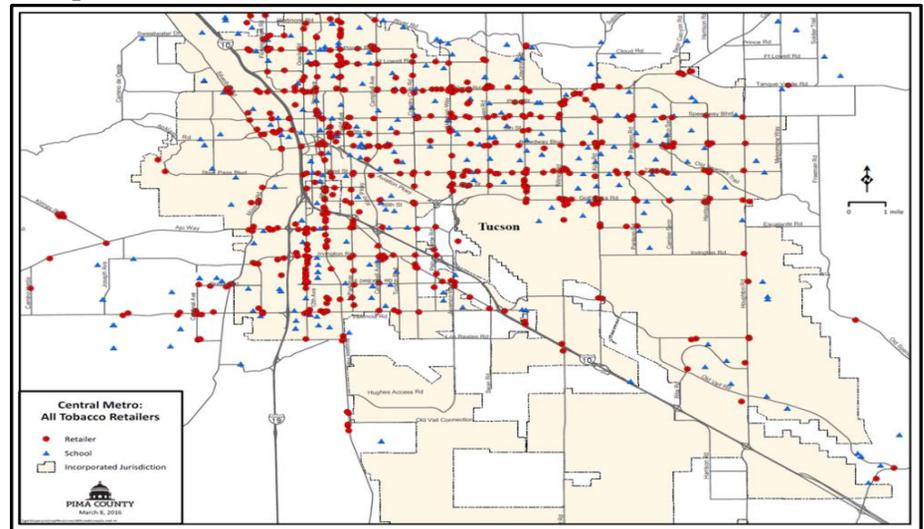
Chart 13



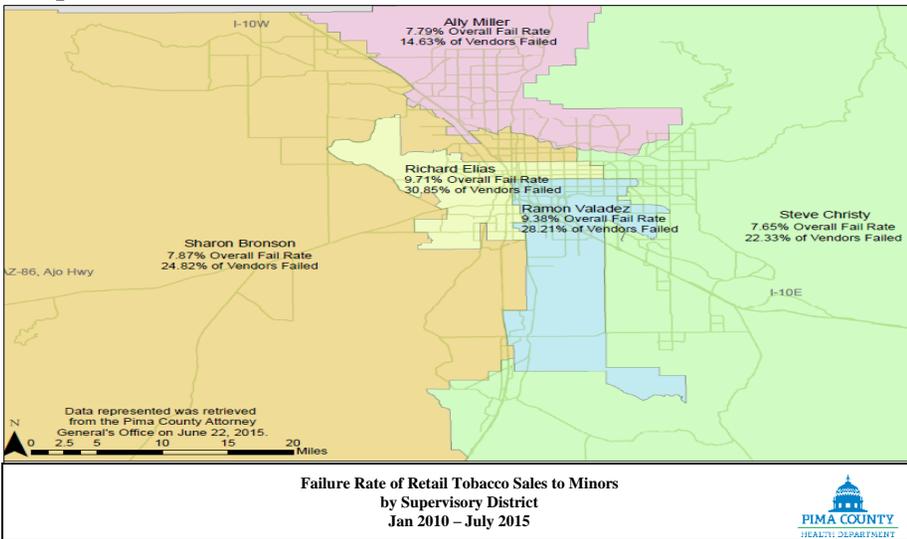
Map 1



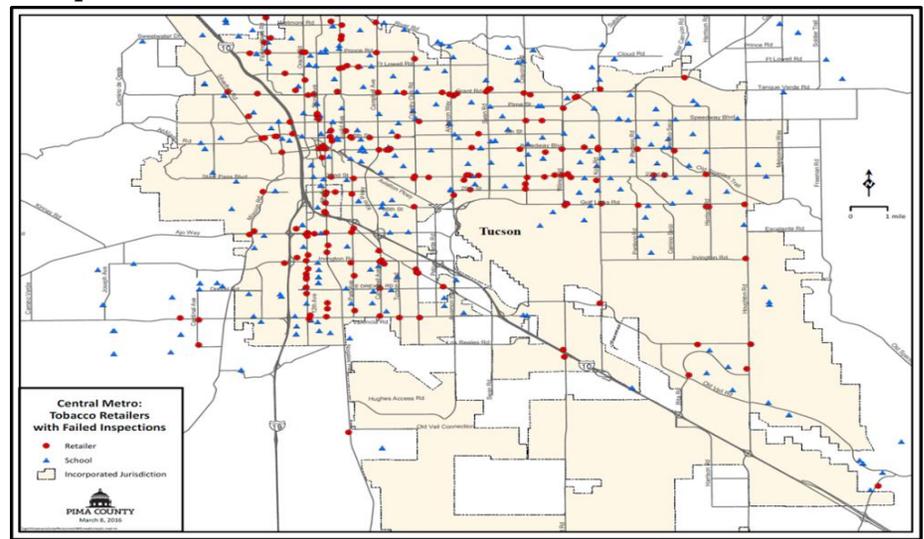
Map 3



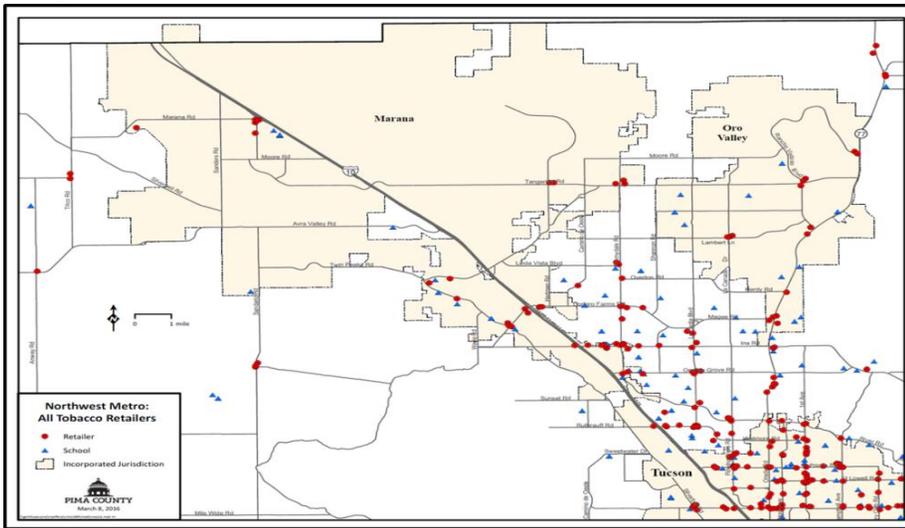
Map 2



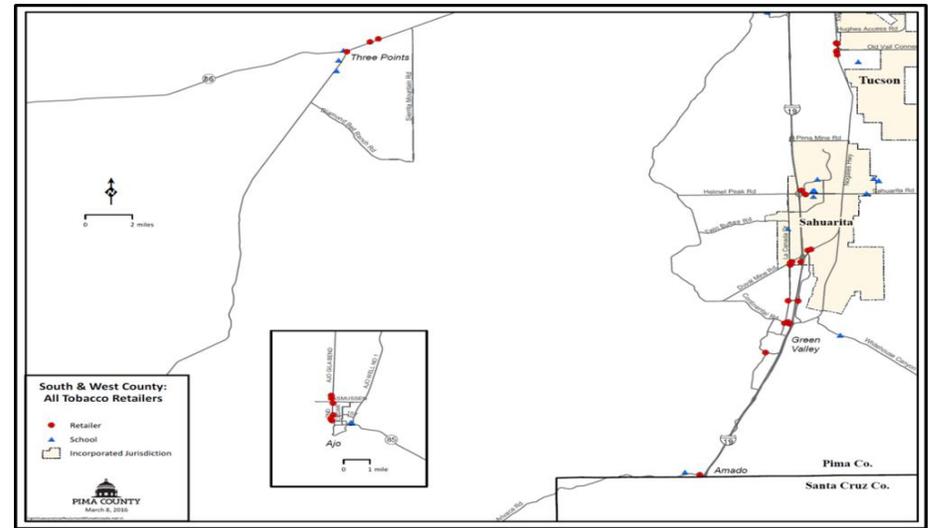
Map 4



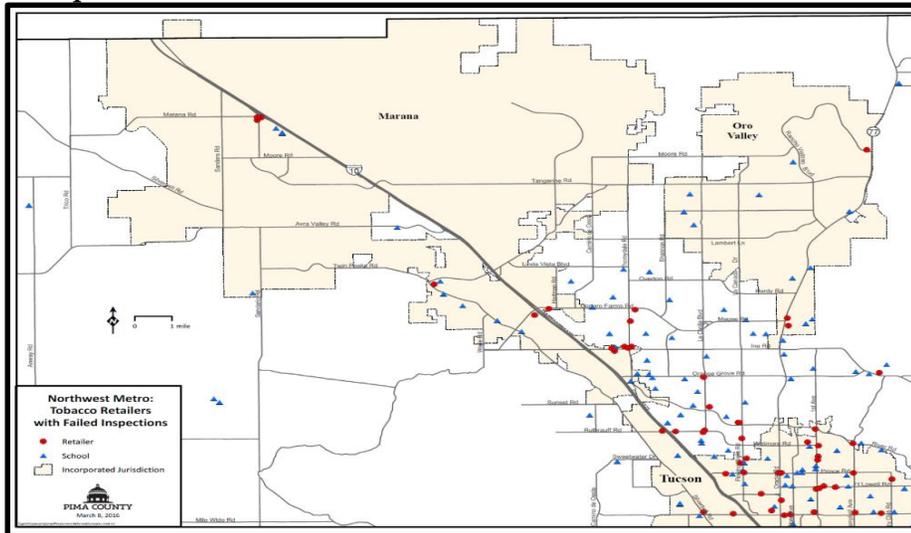
Map 5



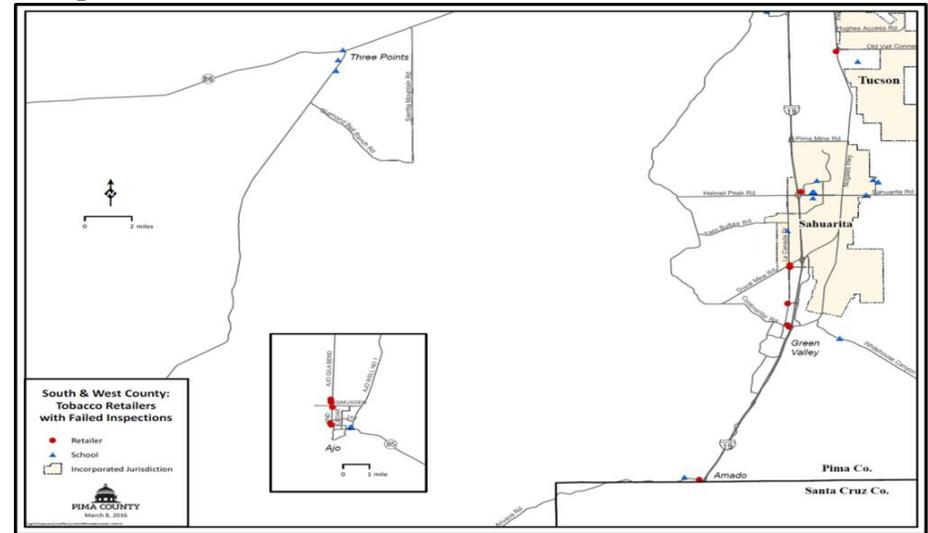
Map 7



Map 6



Map 8



Retail Proximity and Density

“The dominant approach to minimizing illicit drug use among adolescents in the United States has been supply reduction, often dubbed the ‘war on drugs.’ By contrast, the dominant approach to minimizing tobacco use among underage children and adolescents has been demand reduction” (McCarthy, 2009). **In order to best support youth tobacco control efforts, there must be an emphasis on reducing both supply and demand.**

Tobacco Retailer Location and Youth Initiation

As a tool in decreasing tobacco supply to youth and diminish initiation, retail density and proximity restrictions should be utilized to lessen youth exposure to tobacco marketing by reducing commercial access points. “The associations we observed between density of tobacco retailers and experimental smoking risk and the lack of association with established smoking risk suggest that tobacco retailers' greatest influence may be on adolescents who are not yet addicted but are willing to try smoking opportunistically. Once they are addicted, adolescents who smoke may be affected less by retailer proximity and more by internal physiological cues” (McCarthy, 2009). **This finding once again lends itself to the argument that tobacco marketing is aimed at new youth users, not current smokers.**

A proven method to reduce tobacco retailer presence around schools is to impose an effective distance restriction. Effective distance restrictions depend on urban density, but a 2011 study suggests 1000 feet would encompass enough retailers to make a meaningful impact. One study looked at the potential to reduce outdoor tobacco advertising in hopes of reducing youth exposure to tobacco advertising in Missouri and New York.

It found that “[w]ithin 1000 feet of schools, it is estimated that approximately 22% of retailers in Missouri would be affected, [and] 51% in New York” (Luke, 2011). This suggests the 1000-foot rule would encompass enough retailers to make a meaningful impact.

In Tempe, Arizona, a ban on tobacco retailers within a one-quarter mile (1320 foot) radius of a school was adopted. The Deputy Community Development Director said it was in response to resident backlash when a hookah establishment was trying to open its doors near a school.

Tobacco Retail Fails Within 1000 feet of a School

Roughly 40% of tobacco retailer violations occurred with inspections conducted within 1000 feet of a school in Pima County. Additional data was noted when the figures were normalized by segmenting all retailers into two categories: those within 1000 feet of a school and those outside 1000 feet.

Upon evaluation, there was a cause for concern when failing retailers were compared to the overall number of retailers within their same category. Retailers within 1000 feet of a school had failed at a higher rate proportionately to those outside of the 1000 feet. Retailers with a single fail who were within the radius failed approximately 12% more often than those outside the listed boundary. **Retail density and proximity restrictions aren't necessarily designed for the purpose of making it more difficult on youth to access a store, but more so to reduce access points and limit advertising exposure.**

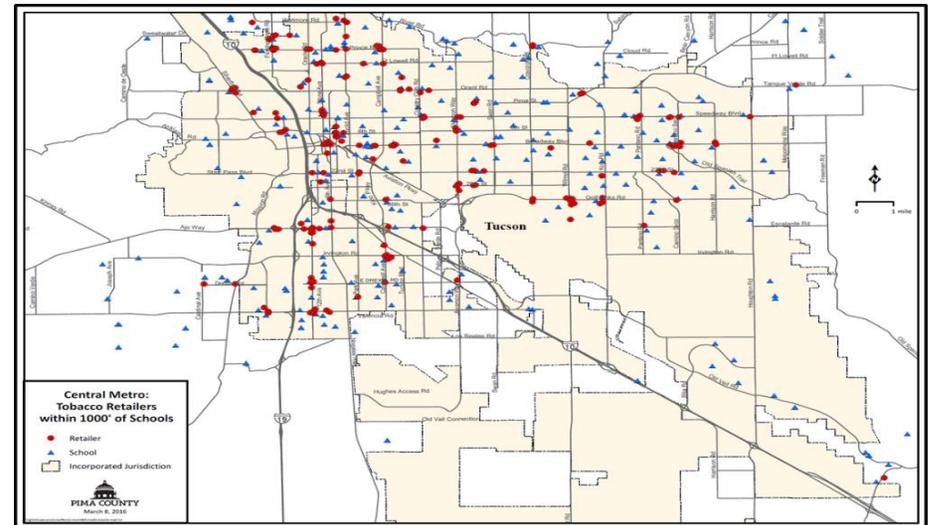
Table 1

Percentage of Tobacco Retailers Failing In/Outside a 1000' Radius of a School Pima County 2010-2015					
Total tobacco retailers inside a 1000' radius of a school: 252	1 Failed Inspection	2 Failed Inspections	3 Failed Inspections	4 Failed Inspections	5+ Failed Inspections
Total tobacco retailers outside a 1000' radius of a school: 600					
Retailer fails inside a 1000' radius of a school	81	17	5	1	1
% Retailer fails inside a 1000' radius of a school	32.14%	6.75%	1.98%	0.40%	0.40%
Retailer fails outside a 1000' radius of a school	122	24	8	2	2
% Retailer fails outside a 1000' radius of a school	20.33%	4.00%	1.33%	0.33%	0.33%

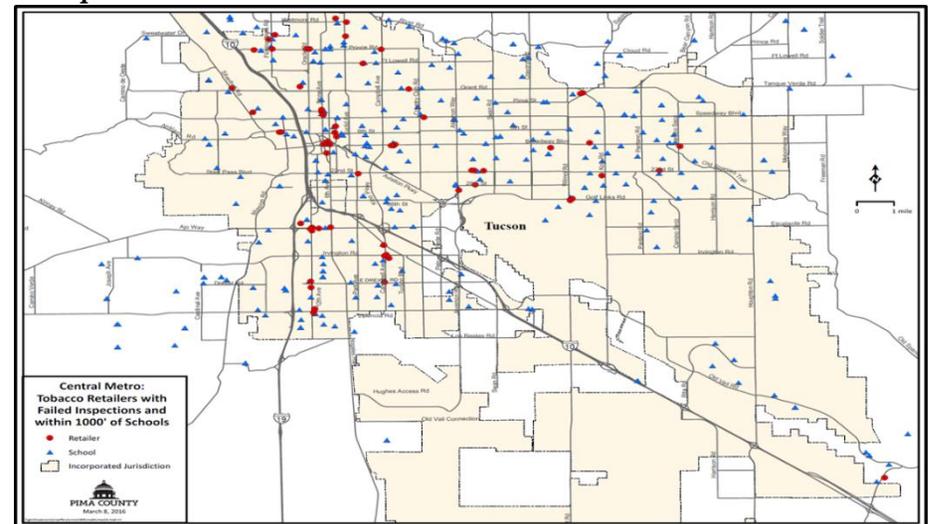
**Figures Normalized*

Pima County/AGO 2015

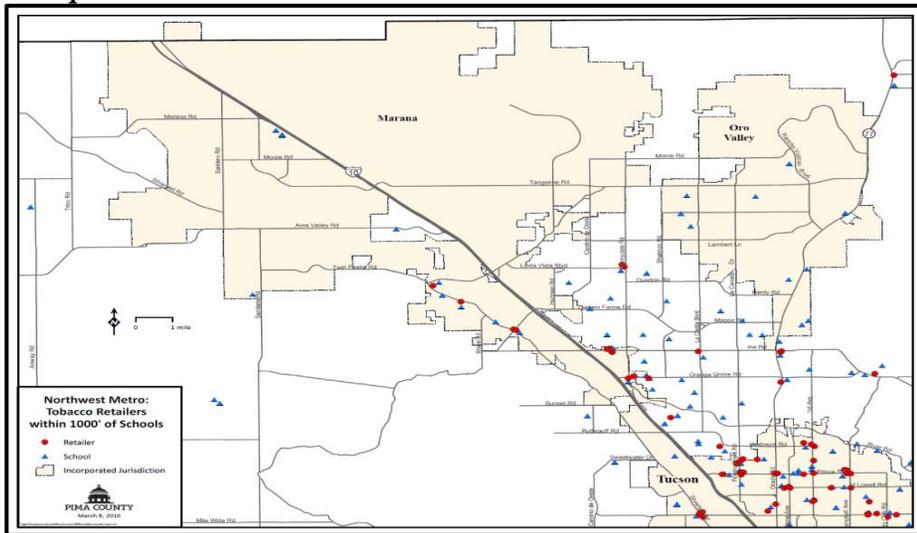
Map 9



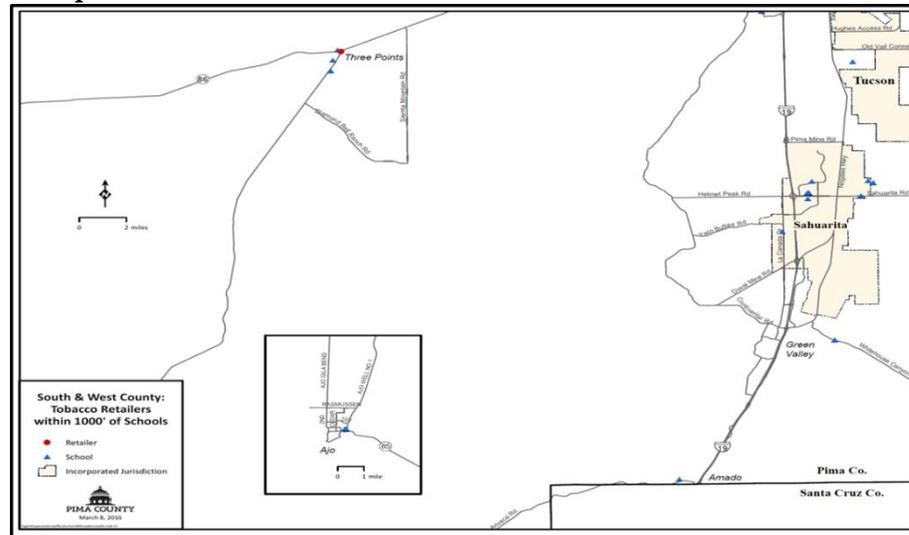
Map 10



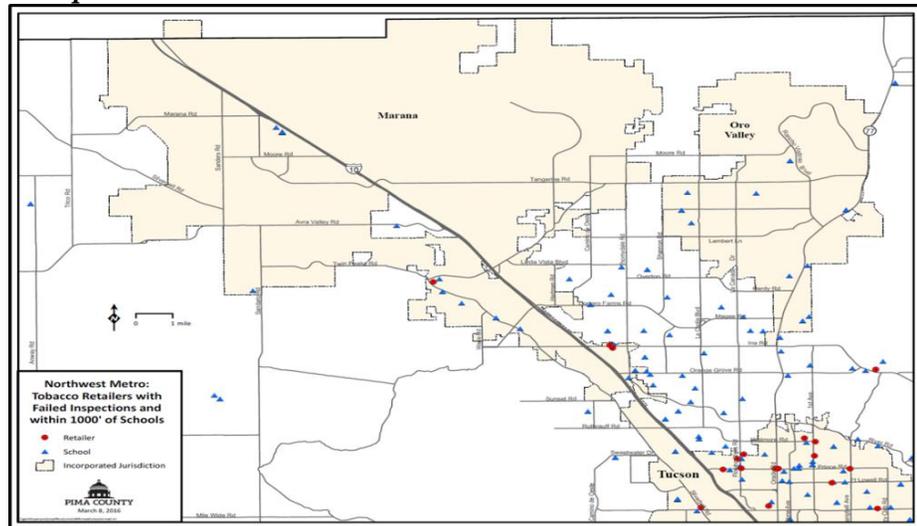
Map 11



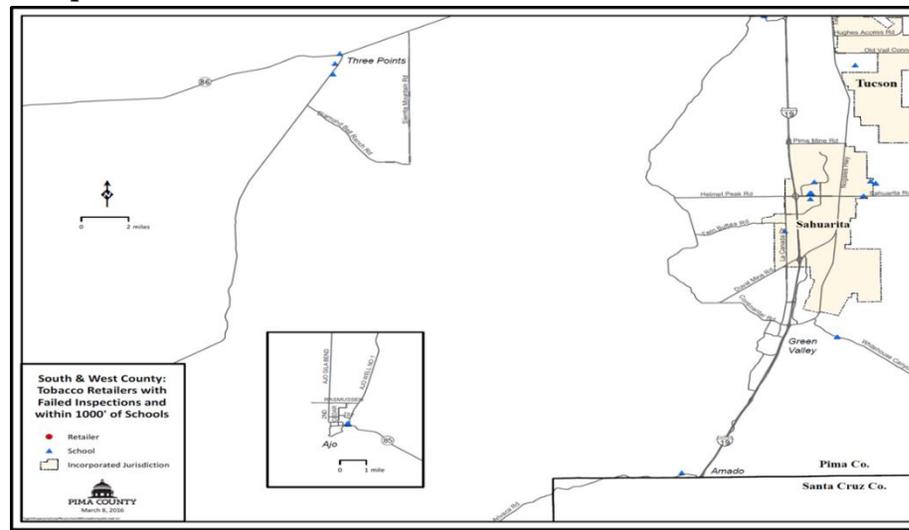
Map 13



Map 12



Map 14



Marketing and Advertising

More often than not, tobacco companies employ questionable tactics to promote and sell their deadly products. Often times store associations and policy makers are encouraged to partner with big

Key Points

- *\$8.5 billion was spent on tobacco marketing in 2014*
- *Spending for e-cigarette advertising increased from \$5.6 million in 2010 to \$15.3 million in 2014*
- *Expenditures for chew tobacco marketing continue to be among the highest recorded*
- *The tobacco industry spent \$600.8 million on chew tobacco marketing in 2014*

tobacco to ensure their investment of anti-tobacco regulation is secured. Coordinating strong relationships with financial assistance enables the industry's targeted messages to drive policy makers' actions.

Even though tobacco advertising has been restricted in many ways over the years, tobacco companies have fine-tuned their advertising approach and marketing plan to attract new youth users regardless of the advertising confines.

Nationally, tobacco companies spend billions of dollars each year on marketing in the retail environment. Between 1999 and 2008, tobacco companies spent \$110.5 billion (92% of their total marketing expenditures) explicitly on point of sale tobacco marketing and promotion (Campaign for Tobacco-Free Kids, 2015).

This avenue of promotion includes the use of tobacco power walls, gas pump signage, trash receptacle placement, banners, in-store external price signage, giveaways, free samples, product discounting, compensation to retailers for prime product/advertisement placement, and incentive pay for sales performance (Campaign for Tobacco-Free Kids, 2015).

Not only is there a profusion of advertising present at most points of sale, but placement of product and advertising, flavors, package color, fonts, themes, images, and price points are all meant to convey a positive image of tobacco brand and/or product.

The startling trend surrounding these marketing tactics is that they do not influence an adult consumer as much as a prospective youth customer. In March 2012, a study showed that "...kids were significantly more likely than adults to recall tobacco advertising. While only 25 percent of all adults recalled seeing a tobacco ad in the two weeks prior to the survey, 45 percent of kids aged 12 to 17 reported seeing tobacco ads" (Bach, 2015). Impressionable youth of all ages are subjected to this marketing for much of their life. **Youth may be more inclined to tobacco initiation and addiction, because of the deceptive messaging they are blasted with on a regular basis.**

Point of Sale Field Survey and Observation

To better understand tobacco point of sale advertising and marketing within the community, the Tobacco and Chronic Disease Prevention Unit surveyed 94 tobacco retailers throughout the county. Available retailer inspection data was obtained from the Arizona Attorney General's Office and utilized to identify as many Pima County tobacco retailers as possible. A random selection was conducted from all known tobacco retailers (excluding bars and restaurants) to identify four establishments within selected zip codes. Two of the retailers had to be located outside a 1000-foot radius of any school and the others were within that radius. Available retail samples in some zip codes were limited, so a one-to-one ratio was used. Some zip codes were completely excluded due to an insufficient retail sample size.

Table 2 is an excerpt from the larger data set collected during the field study. **The data suggests that some retailer types within 1000 feet of a school tend to have more tobacco advertising present than those of the same type outside of that radius.**

Table 2

Pima County Tobacco Advertising Stats by Retailer Type - Out/In a 1000' Radius of a School				
	Convenience/ Liquor Store		Convenience Store w/ Gas	
	Out	In	Out	In
# Retailers Surveyed	6	2	24	20
Total # ads outside retailer:	4	4	172	114
Mean # ads outside retailer:	1	2	7	6
Median # ads outside retailer:	1	2	6	7
Mode # ads outside retailer:	0	2	0	8
Maximum # ads outside:	2	2	26	10
Minimum # ads outside:	0	2	0	0
Range # of ads outside retailer:	2	0	26	10
Total # cigarette ads outside:	2	3	77	65
Mean # cigarette ads outside:	0	2	3	3
Median # cigarette ads outside:	0	2	2	3
Mode # cigarette ads outside:	0	#N/A	0	2
Maximum # cigarette ads outside:	1	2	12	9
Minimum # cigarette ads outside:	0	1	0	0
Range # of cigarette ads outside:	1	1	12	9
Total # ENDS ads outside:	1	1	30	26
Mean # ENDS ads outside:	0	1	1	1
Median # ENDS ads outside:	0	1	1	1
Mode # ENDS ads outside:	0	#N/A	0	1
Maximum # ENDS ads outside:	1	1	8	7
Minimum # ENDS ads outside:	0	0	0	0
Pima County/PCCHD 2015 outside:	1	1	8	7

Field survey observations appear to be in line with what established research and current data convey:

- **Tobacco advertising is heavily present at point of sale**
- Teens frequent convenience stores more often than adults
- Teens report they purchase tobacco most often at a gas station (only second to “*at some other place not listed*”)
- **Teens are taking risks as they explore their identity**
- Teens are heavily susceptible to marketing and price points
- **Youth initiation is correlated with density and proximity of tobacco retailers to a school**
- **AGO inspection data shows a higher fail rate within the gas/convenience store industry**

It’s important to point out that the advertising survey only included individual pieces of advertising and excluded tobacco marketing tools such as promos, price discounts, power walls, and packaging. However, these tactics should not go unnoticed. The way tobacco is packaged is also an extremely effective way for tobacco companies to gain a youth’s attention while conveying misleading, positive messages about their product. **Packaging is a huge draw to youth who are discovering their consumer independence and purchasing power.** “Researchers reported that young people had consistently more negative impressions of plain packs relative to branded cigarette packs...[P]lain packaging reduces misconceptions created by pack colors, which tobacco companies have used to suggest that some variants pose fewer risks to smokers than others” (Hoek, 2011).

Figures 7 and 8 show the variety, placement, and amount of tobacco ads that appear more frequent with locations in closer proximity to schools.

Figure 7



Figure 8



Perception of Tobacco Use

How Youth Perceive Peer Tobacco Use

Adolescents' stereotypes of smokers are largely negative. Tobacco control interventions targeting adolescents and young adults would be impactful by involving peers, family and local

communities. **Engagement should go beyond providing knowledge on harmful effects of smoking to interventions that influence adolescents' social construct of tobacco use and abuse.**

Key Points

- 26.9% of students overall do not disapprove of peers smoking



Chart 14

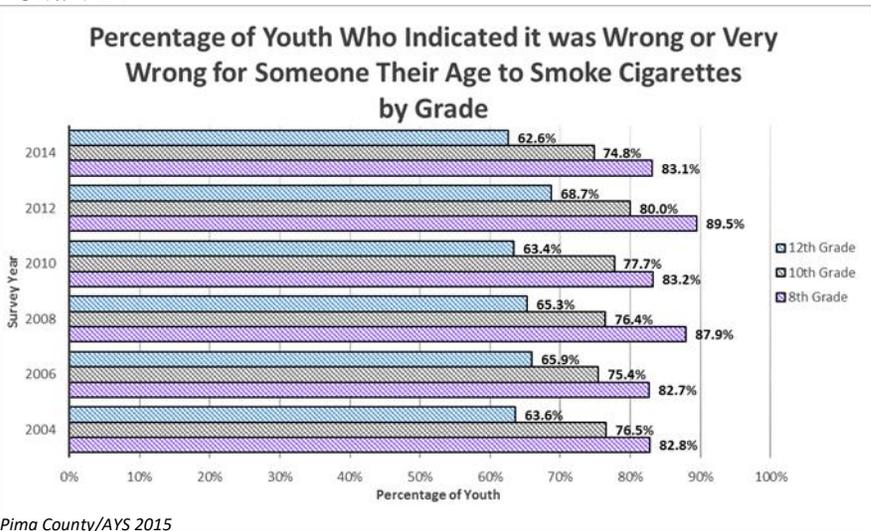
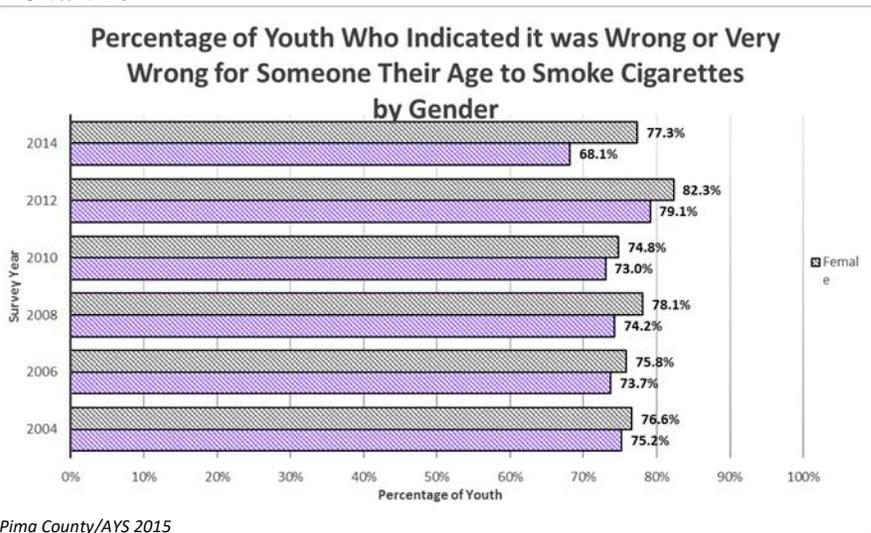


Chart 15



How Youth Perceive the Danger of Tobacco Use

It is apparent that efforts to positively influence youth mindset towards smoking, although stabilized, has resulted in progress. A high percentage of youth across all Arizona counties perceive a moderate/great risk in smoking 1+ packs of cigarettes daily. The state of Arizona has a percentage of 83.8%, as compared to 83.9% in Pima County.

Key Points

- 83.9% of Pima County youth perceive moderate/great risk in smoking one or more packs a day
- 12% less middle school youth perceived one or more packs a day as a moderate/great risk compared to high school youth
- Less than 80% of Hispanics perceived a moderate/great risk associated with one or more packs a day
- The percentage of high school students who perceived smoking as a risk has been virtually unchanged since 2004

Even as the state makes progress in decreasing adolescent smoking, alternate forms of tobacco, including e-cigarettes, create related health risk and potential for nicotine addiction.

Chart 16

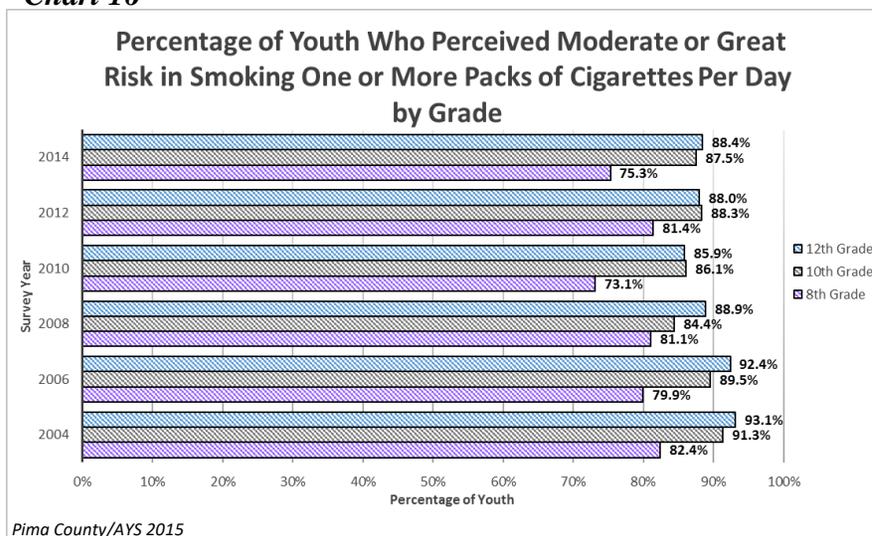
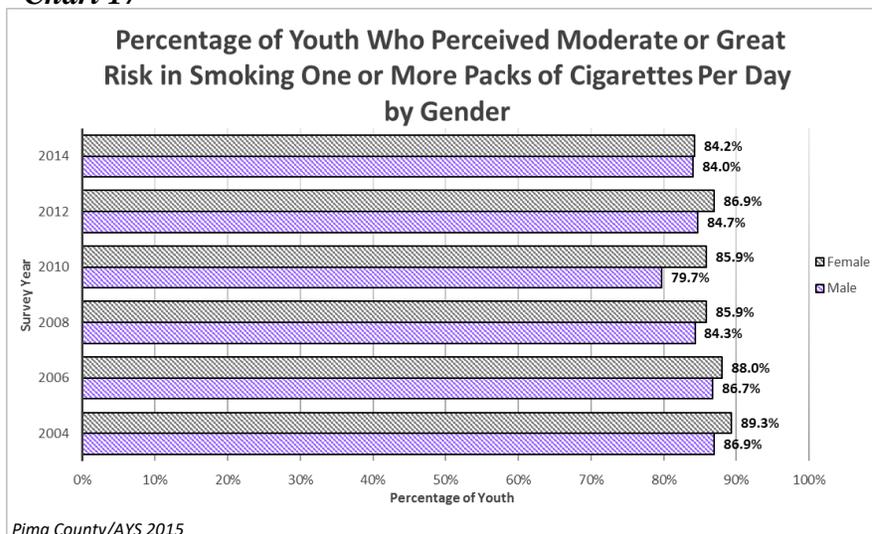


Chart 17



How Youth Perceive their Parents Disapproval of Tobacco Use

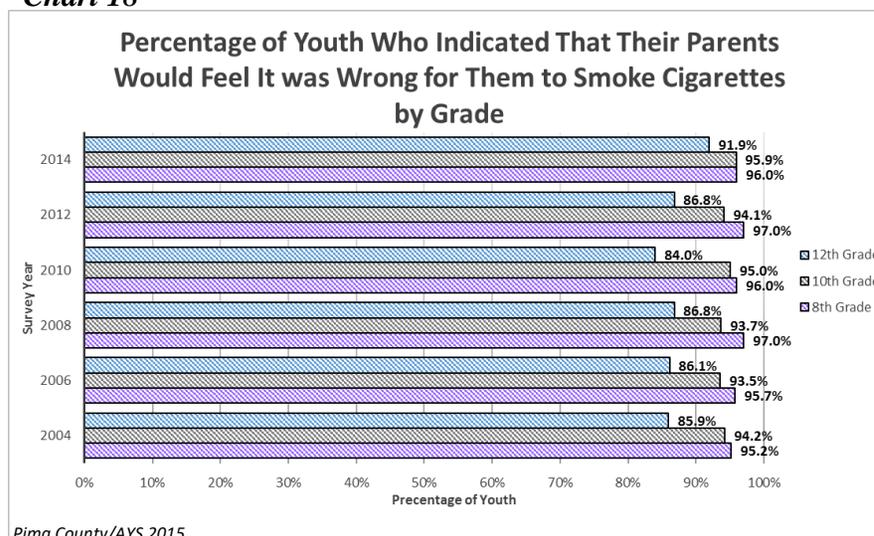
There is a high percentage of youth who believe their parents would disapprove of youth smoking cigarettes.

Key Points

- 94.5% of Pima County youth report their parents would disapprove of youth smoking cigarettes
- Across all school years, 12th grade youth perception of parental disapproval of tobacco was at a lower percentage than that of 8th and 10th graders
- Age appears to be the driving factor in how youth believe their parents would view smoking
- As of 2014, all ethnic groups sampled exceeded a 90% response rate that their parents would disapprove of a youth smoking

However, in all years listed in 2014, high school seniors perceived disapproval of smoking at a lower percentage than that of their classmates. This data does not coincide with the number of students who disclosed having spoken with their parents about tobacco.

Chart 18



Disclosure Regarding Tobacco Use

Healthy family functioning and adequate levels of involvement between youth and their guardians are family characteristics that may act as protective factors against the use of tobacco products and provides support that parents should talk about tobacco.

Key Points

- *29.5% of youth in Pima County have talked to their parents about tobacco*
- *Since 2008, across all grade levels, the number of students who reported having spoken with parents about tobacco has declined*

Youth who have multiple risk factors may be more vulnerable to influence and negative behaviors that are reinforced by peer groups with negative values.

The disclosure data listed demonstrates that interventions should target both parents and students. There is also significance in considering social environmental factors when engaging youth and monitoring outcomes. Aside from family structure, the social system for youth and their peers play a critical role in tobacco initiation and use.



Closing Discussion

In review of state, national and available local data, it is apparent that there is not a one size fits all for tobacco control as trends and extrinsic factors change. Clearly, along with the successes in the fight against adolescent tobacco use and addiction, there have been challenges along the road as well.

With recent data showing Pima County youth smoking more than their peers from around the state and a steady increase in tobacco retailer fail rates throughout the county, it's apparent there are gaps in youth tobacco control strategies, intervention and collaboration. In addition, there has been a significant rise in the popularity and use of alternative forms of tobacco and nicotine use among youth, and their positive perception of these types of products is a growing threat. The combined effects of individual factors and social environment conditions on youth tobacco use also needs to be addressed with an emphasis on cohesive community interventions.

There is a number of promising tobacco control strategies, especially when they are conducted in a coordinated way to take advantage of potential synergies across interventions:

- **School-Based Education and Peer Education Programs**
- **Youth Access Restrictions and Regulations**
- **Penalties for Youth Access and Purchase**
- **Tobacco Advertising Restrictions and Mass Media, Counter Marketing Campaigns**
- **Tobacco Retailer Ordinances**
- **Tobacco Free Space Policies**
- **Cessation Interventions**
- **Community Based Programming and Feedback**

Several of these strategies have already been implemented in Pima County over the past year. There is significance when these community interventions encompass multiple components that target a community at a number of different levels, including individuals, families, institutions, policies and the social environment. **Given the devastating health impact of tobacco related illness, effective policies that focus on tobacco prevention and cessation could intercept the trend towards youth nicotine addiction.**

Going forward, when looking at the greatest impact we will have as a leader in tobacco control, we must diligently examine what we have gained from past energy and investments, and as a community partner we will methodically determine what interventions and resources have the greatest impact when investing in our future.

Definitions

30 Day Use – a measure of the percentage of students who used the substance at least once in the 30 days prior to being surveyed and is a proxy for the level of current use of the substance

ADHS – Arizona Department of Health Services

AYS – Arizona Youth Survey

BTCD- Bureau of Tobacco and Chronic Disease

CDC Centers for Disease Control and Prevention; an agency of the US Department of Health and Human Services

E-Cigarette – A handheld electronic device containing a nicotine-based liquid that is vaporized and inhaled, used to simulate the experience of smoking tobacco.

Hookah - A water pipe that is used to smoke tobacco and flavored tobacco usually in a group setting; also called hubble-bubble or water-pipe

Lifetime Use - a measure of the percentage of students who tried the particular substance at least once in their lifetime and is used to show the percentage of students who have had experience with a particular substance

Protective Factors - Factors that exert a positive influence and buffer against the negative influence of risk, thus reducing the likelihood that adolescents will engage in problem behaviors

NYRBS - The National Youth Risk Behavior Survey is a population-based survey designed to monitor priority health risk behaviors that contribute markedly to the leading causes of death, disability, and social problems among youth in the United States

Risk Factors - Characteristics of school, community and family environments, and of students and their peer groups known to predict increased likelihood of drug use, delinquency, school dropout, and violent behaviors among youth

Snus A moist powder smokeless tobacco product used by placing under the upper lip

Young Adult – Person 18 – 24 years of age

Youth and Adolescents – Person 18 years or younger

References

- Arizona Department of Health Services (ADHS), Bureau of Tobacco and Chronic Disease, Centers for Disease Control and Prevention (CDC), Office of Smoking and Health (OSH), Orc, M., & Arizona Department of Education (DOE). (2013). *Arizona Youth Tobacco Survey 2013* (pp. 1-42) (United States, Arizona Department of Health Services, Bureau of Tobacco and Chronic Disease). Phoenix, AZ.
- Bach, L. (2015, June 4). Trends In Tobacco Industry Marketing - Tobacco-Free Kids. Retrieved February 25, 2016, from <http://www.tobaccofreekids.org/research/factsheets/pdf/0156.pdf>
- Bach, L. (2015, October 7). Tobacco Company Marketing To Kids. Retrieved February 25, 2016, from <https://www.tobaccofreekids.org/research/factsheets/pdf/0008.pdf>
- Campaign for Tobacco-Free Kids. (2016, February). States And Localities That Have Raised the Minimum Legal. Retrieved March 4, 2016, from https://www.tobaccofreekids.org/content/what_we_do/state_local_issues/sales_21/states_localities_MLSA_21.pdf
- Campaign for Tobacco-Free Kids. (2015, September 25). The Toll of Tobacco in Arizona. Retrieved February 25, 2016, from https://www.tobaccofreekids.org/facts_issues/toll_us/arizona
- Campaign for Tobacco-Free Kids. (2015, July 01). U.S. State and Local Issues. Retrieved March 04, 2016, from http://www.tobaccofreekids.org/what_we_do/state_local/taxes/
- Centers for Disease Control and Prevention. (2015, November 09). Dangers of Hookah Smoking. Retrieved March 06, 2016, from <http://www.cdc.gov/features/hookahsmoking/>
- Centers for Disease Control and Prevention (CDC). (2015, October 14). Youth and Tobacco Use. Retrieved February 25, 2016, from http://www.cdc.gov/tobacco/data_statistics/fact_sheets/youth_data/tobacco_use/
- Centers for Disease Control and Prevention (CDC). (2014). Smokefree Policies Improve Health. Retrieved March 04, 2016, from http://www.cdc.gov/tobacco/data_statistics/fact_sheets/secondhand_smoke/protection/improve_health/
- Children's Health Team. (2012, December 12). Smoking - The Hookah Habit Is Harmful - Health Essentials from Cleveland Clinic. Retrieved March 06, 2016, from <https://health.clevelandclinic.org/2012/12/smoking-the-hookah-habit-is-harmful/>
- Convenience Store News. (2016, March 15). Costco Phasing Out Tobacco Sales. Retrieved March 24, 2016, from <http://www.csnews.com/product-categories/tobacco/costco-phasing-out-tobacco-sales>
- Counter Tobacco, American Heart Association, & Campaign for Tobacco-free kids. (2012, March 5). Deadly Alliance. Retrieved February 25, 2016, from http://www.tobaccofreekids.org/content/what_we_do/industry_watch/store_report/deadlyalliance_full_report.pdf

- Counter Tobacco. (2014). Stores Near Schools. Retrieved February 25, 2016, from <http://countertobacco.org/stores-near-schools>
- Difranza, J. R., & Coleman, M. (2001). Sources of tobacco for youths in communities with strong enforcement of youth access laws. *Tobacco Control, 10*(4), 323-328. doi:10.1136/tc.10.4.323
- Hanewinkel, R., Isensee, B., Sargent, J. D., & Morgenstern, M. (2010). Cigarette Advertising and Adolescent Smoking. *American Journal of Preventive Medicine, 38*(4), 359-366. Retrieved March 3, 2016, from [http://www.ajpmonline.org/article/S0749-3797\(10\)00058-9/fulltext?refuid=S0749-3797\(13\)00429-7&refissn=0749-3797](http://www.ajpmonline.org/article/S0749-3797(10)00058-9/fulltext?refuid=S0749-3797(13)00429-7&refissn=0749-3797)
- Henriksen, L., Schleicher, N. C., Feighery, E. C., & Fortmann, S. P. (2010). A Longitudinal Study of Exposure to Retail Cigarette Advertising and Smoking Initiation. *Pediatrics, 126*(2), 232-238. Retrieved March 3, 2016, from <https://www.tobaccofreekids.org/research/factsheets/pdf/0075.pdf>.
- Hoek, J., Gendall, P., Gifford, H., Pirikahu, G., Mccool, J., Pene, G., . . . Thomson, G. (2011). Tobacco Branding, Plain Packaging, Pictorial Warnings, and Symbolic Consumption. *Qualitative Health Research, 22*(5), 630-639. Retrieved March 2, 2016, from https://www.researchgate.net/profile/Judith_Mccool/publication/51926486_Tobacco_branding_plain_packaging_pictorial_warnings_and_symbolic_consumption/links/54b4373f0cf28ebe92e46514.pdf.
- Leventhal, A. M., Strong, D. R., Kirkpatrick, M. G., Unger, J. B., Sussman, S., Riggs, N. R., Audrain-McGovern, J. (2015). Association of Electronic Cigarette Use With Initiation of Combustible Tobacco Product Smoking in Early Adolescence. *JAMA, 314*(7), 700-707. Retrieved February 25, 2016, from <http://jama.jamanetwork.com/article.aspx?articleid=2428954&resultClick=3>
- Luke, D. A., Kurt, R. M., Smith, C., & Sorg, A. A. (2011). Family Smoking Prevention and Tobacco Control Act: Banning Outdoor Tobacco Advertising Near Schools and Playgrounds. *American Journal of Preventative Medicine, 40*(3), 295-302. Retrieved February 25, 2016, from [http://www.ajpmonline.org/article/S0749-3797\(10\)00737-3/fulltext](http://www.ajpmonline.org/article/S0749-3797(10)00737-3/fulltext)
- McCarthy, W. J., Mistry, R., Lu, Y., Patel, M., Zheng, H., & Dietsch, B. (2009). Density of Tobacco Retailers Near Schools: Effects on Tobacco Use Among Students. *Am J Public Health American Journal of Public Health, 99*(11), 2006-2013. Retrieved February 25, 2016, from <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2759807/>
- Myers, A. E., Hall, M. G., Isgett, L. F., & Ribisl, K. M. (2015). A comparison of three policy approaches for tobacco retailer reduction. *Preventive Medicine, 74*, 67-73. Retrieved February 25, 2016, from <http://www.ncbi.nlm.nih.gov/pubmed/25689540>
- National Institute of Health. (n.d.). Health Effects. Retrieved February 25, 2016, from <http://teen.smokefree.gov/yourHealthEffects.aspx>

National Institute on Drug Abuse. (2016, February 11). How Does Nicotine Act in the Brain? Retrieved February 25, 2016, from <https://teens.drugabuse.gov/educators/nida-teaching-guides/mind-over-matter-teaching-guide-and-series/tobacco-addiction/how-does>

Polito, J. R. (2015, June 18). Nicotine Addiction 101. Retrieved March 24, 2016, from <http://whyquit.com/whyquit/LinksAAddiction.html>

Simon, S. (2013, November 14). E-Cigarettes, Hookahs Gain Popularity Among US Youth. Retrieved March 06, 2016, from <http://www.cancer.org/cancer/news/news/e-cigarettes-hookahs-gain-popularity-among-us-youth>

Singh, T., Marynak, K., Arrazola, R. A., Cox, S., Rolle, I. V., & King, B. A. (2016). Vital Signs : Exposure to Electronic Cigarette Advertising Among Middle School and High School Students — United States, 2014. *MMWR. Morbidity and Mortality Weekly Report MMWR Morb. Mortal. Wkly. Rep.*, 64(52), 1403-1408. Retrieved February 25, 2016, from http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6452a3.htm?s_cid=mm6452a3_w

TobReg - World Health Organization Study Group on Tobacco Product Regulation. (2005). *Advisory note: Waterpipe tobacco smoking: Health effects, research needs, and recommended actions by regulators*. Geneva, Switzerland: World Health Organization, Tobacco Free Initiative. Retrieved March 6, 2016, from http://www.who.int/tobacco/global_interaction/tobreg/Waterpipe%20recommendation_Final.pdf

U.S. Department of Health and Human Services (HHS), *The Health Consequences of Smoking—50 Years of Progress: A Report of the Surgeon General*. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2014, <http://www.surgeongeneral.gov/library/reports/50-years-of-progress/>

Appendix

E-Cigarette Issues Impacting Public Health Report



PIMA COUNTY

HEALTH DEPARTMENT

**E-cigarette Issues
Impacting Public Health**

December 14, 2016

Background

The Pima County Tobacco and Chronic Disease Prevention Unit is dedicated to addressing tobacco addiction, prevention and education. The unit is focused on addressing tobacco program needs and building the capacity to enhance current services as they relate to targeting tobacco initiation and abuse.

This document explores Electronic Nicotine Delivery Systems (ENDS), which are more widely referred to as e-cigarettes, e-hookahs, hookah pens, vaporizers and vape pipes. E-cigarettes are battery-operated devices that heat e-liquid from a cartridge and allow the user to inhale and exhale a chemical-filled aerosol (sometimes called vapor). The e-liquid usually contains nicotine, water and a solvent such as propylene glycol, and is often flavored and colored with various chemical agents.

While ENDS are not new to the marketplace, there has been a significant influx in their popularity in recent years, especially within the youth population. Despite limited access to data and research on the negative health effects of ENDS, there is solid evidence of the adverse effects of nicotine which makes the use of e-cigarettes a growing health concern.

E-cigarette Prevalence

Adult Prevalence

There has been a huge increase in the use of e-cigarettes, both among people who have never smoked and current smokers. Use is highest among young adults and current cigarette smokers, however almost a third of current users are nonsmokers (Nicotine and Tobacco Research, 2015).

Arizona

- There is no current or reliable data for adult prevalence in Arizona.

Nationally

- Among adults who had never smoked cigarettes, 3.2% had ever tried an e-cigarette. Ever having used an e-cigarette was highest among never-smokers aged 18–24 (9.7%) and declined with age (NCHS, 2015).
- In 2014, 12.6% of U.S. adults had ever tried an e-cigarette, and about 3.7% of adults used e-cigarettes daily or some days (NCHS, 2015).
- A recent study by The University of Chicago, College of Medicine found that an increase in the desire to smoke a regular cigarette after observing e-cigarette use was as strong as after observing regular cigarette use.
- Non-Hispanic AIAN adults and non-Hispanic white adults were more likely to have ever tried an e-cigarette, at 20.2% and 14.8% respectively, than Hispanic (8.6%), non-Hispanic black (7.1%), and non-Hispanic Asian (6.2%) adults (NCHS, 2015).
- Current e-cigarette use was higher among non-Hispanic AIAN adults (10.7%) and non-Hispanic white adults (4.6%) than among Hispanic (2.1%), non-Hispanic black (1.8%), and non-Hispanic Asian (1.5%) adults (NCHS,2015).

Youth Prevalence

Despite an overall reduction in traditional tobacco use, e-cigarette use among youth continues to rise. The progress made with youth tobacco prevention efforts has been threatened with the reality that e-cigarettes have surpassed current use of every other tobacco product.

Arizona

- 51.6% of youth in Arizona have used an electronic vapor product (including e-cigarettes, e-cigars, e-pipes, vape pipes, vaping pens, e-hookahs, and hookah pens) compared to 44.9% nationally (YRBSS, 2015). The CDC forecasts Arizona youth will be more likely to have a higher burden of prevalence in the future.
- Arizona youth who are current vape users (those who used e-cigarettes, e-cigars, e-pipes, vape pipes, vaping pens, e-hookahs, and hookah pens on at least 1 day during the 30 days before the survey) were at 27.5%, outpacing the national rate of 24.1% (YRBSS, 2015).

Nationally

- Recent surveys show teen e-cigarette use now exceeds cigarette smoking among U.S. youth (Campaign for Tobacco-Free Kids).
- More than 3 million middle and high school students were current users of e-cigarettes in 2015, up from an estimated 2.46 million in 2014 (FDA, 2016).
- 16% of high school and 5.3% of middle school students were current users of e-cigarettes in 2015, making e-cigarettes the most commonly used tobacco product among youth for the second consecutive year (FDA, 2016).
- During 2011-2015, e-cigarette use rose from 1.5% to 16.0% among high school students and from 0.6% to 5.3% among middle school students (FDA, 2016).

Secondhand Exposure

There is very limited research completed on secondhand exposure to e-cigarette vapor, but in 2015, the CDC Office on Smoking and Health offered nonsmokers the following guidance:

- *E-cigarette aerosol is not harmless water vapor. In addition to nicotine, e-cigarette aerosol can contain heavy metals, ultrafine particulates that can be inhaled deep into the lungs, and cancer causing agents like acrolein.*
- *E-cigarette aerosols also contain propylene glycol or glycerin and flavorings. Some e-cigarette manufacturers claim that the use of these ingredients is safe because they meet the FDA definition of “generally recognized as safe” (GRAS). However, GRAS status applies to ingestion of these ingredients (i.e., in food), not inhalation. The health effects of inhaling these substances, including from an e-cigarette, are unknown.*
- *Inhaling e-cigarette aerosol directly from the device or from secondhand aerosol that is exhaled by users is potentially harmful to health. Therefore, in prevention of potential chronic conditions, adult non-tobacco users should not use e-cigarettes and should not be exposed to secondhand aerosol from these products.*

E-cigarette as a Cessation Device

Some people believe e-cigarette products may help smokers curb nicotine cravings while they are trying to discontinue their tobacco use. However, at this point it is unclear whether e-cigarettes may be effective for smoking cessation (ADHS, 2015).

- E-cigarettes are regulated as tobacco products and not approved as a cessation device.
- There is the possibility that e-cigarettes could perpetuate nicotine addiction and thus interfere with quitting (ADHS, 2015).
- Among current cigarette smokers who had attempted to quit smoking in the past year, more than half had ever tried an e-cigarette and 20.3% were current e-cigarette users (NCHS, 2015).

Marketing and the Retail Environment

The ENDS industry employs the same refined, pointed, and expertly placed marketing tactics that has been used for decades to promote traditional tobacco products. As of recent, the ENDS business had two major advantages over the traditional tobacco industry: no evidence of adverse effects of smoking e-cigarettes and limited regulation. Without the current FDA regulation, ENDS companies promoted their products freely without human health interest and many times made unsubstantiated claims about the safety and purpose of their products. With the FDA extending regulation to the ENDS industry, progress has been made with product regulation. However, the industry will find a way to continue fabricating its positive image of e-cigarettes. This type of marketing fuels unhealthy social norms through misleading messages and tailored marketing psychology. As a result, users may neglect the risks of a lifelong addiction and the other potential health dangers of drug dependency.

Arizona Retail Environment

- Since the Arizona statute (A.R.S. § 13-3622) restricting access to youth under the age of 18 went into effect in September of 2013, e-cigarettes have been included in the undercover tobacco inspections that the Attorney General's Counter Strike Program implements. To date, 75% of inspections where youth requested only e-cigarettes or e-hookah resulted in a sale (ADHS, 2015).
- According to a 2013 study done by the Arizona Attorney General's Office, 70% of stores within the state sell e-cigarettes. Of those, 42% sell candy or fruit flavored e-cigarette products (ADHS, 2015).

National Retail Environment

- In 2013-2014, 81% of current youth e-cigarette users cited the availability of appealing flavors as the primary reason for use.
- There is concern that e-cigarettes may appeal to youth because of their high-tech design, easy availability, and the wide array of flavors available (ADHS, 2015).
- More than 250 different e-cigarettes are currently on the market.
- Seven in ten US middle and high school youth, roughly 18 million students, were exposed to e-cigarette ads in 2014.
- More than one in two U.S. middle and high school youth were exposed to e-cigarette ads in a retail store.

Laws and Regulations

Smoking laws and regulation in each state vary widely. The selling and use of e-cigarettes may be regulated or banned altogether in some municipalities and not in others. Over past years, many public health organizations and policymakers have expressed concern about the safety and public health impact of these products due to illusive marketing tactics, lack of regulatory oversight and manufacturing standards and age restriction issues.

Recently, a growing number of local, state, and federal governments have taken steps to regulate the sale, marketing, and use of e-cigarettes in order to protect the health of users, reduce youth initiation to nicotine and tobacco products, and promote enforcement of tobacco-free laws.

Arizona Laws

- “Vapor Products” were included in A.R.S. Code 13-3622 in 2013 and established the following:
*“Furnishing of tobacco product, **vapor product** or tobacco or shisha instruments or paraphernalia to minor; minor accepting or receiving tobacco product, **vapor product** or tobacco or shisha instruments or paraphernalia; illegally obtaining tobacco product, **vapor product** or tobacco or shisha instruments or paraphernalia by underage person; classification; definitions.”* (Arizona State Legislature, 2016)

The law defines a “Vapor Product” as:

[A] noncombustible tobacco-derived product containing nicotine that employs a mechanical heating element, battery or circuit, regardless of shape or size, that can be used to heat a liquid nicotine solution contained in cartridges. Vapor product does not include any product that is regulated by the United States food and drug administration under chapter V of the federal food, drug and cosmetic act. (Arizona State Legislature, 2016)

- The Smoke-Free Arizona Act **only** prohibits combustible tobacco smoking inside or within twenty feet of an establishment. It is left to the individual establishment or organization to institute and enforce a policy that prohibits e-cigarette use.
- Three Arizona municipalities (Tempe, Guadalupe, and Gilbert) have all enacted their own e-cigarette bans which use Smoke-Free language as the model.

National Regulation

- In 2016, the FDA finalized a rule extending regulatory authority to all tobacco products including vaporizers, vape pens, hookah pens, electronic cigarettes (e-cigarettes), e-pipes, and all other ENDS (FDA, 2016). These new regulations on e-cigarette products establish the following conditions:
 - Vapor products are considered tobacco products, not cessation devices
 - Set the minimum age to purchase at 18 years of age
 - Set marketing and packaging restrictions
 - Rules on manufacturing practices for delivery mechanisms and liquids

Summary

Inhaling nicotine is one of the most effective ways to deliver nicotine to the body and is more likely to lead to an addiction. “In contrast, nicotine replacement therapies that help smokers quit do not pose a significant risk of abuse” (Truth, 2015). It is fair to say that nicotine alone does not cause cancer, and its consequences vary depending on the product and use. However, it may contribute to other health problems and is one of the most addictive substances known to date.

CDC Director Tom Frieden stated, “Adolescence is a critical time for brain development. Nicotine exposure at a young age may cause lasting harm to brain development, promote addiction, and lead to sustained tobacco use. And in another recent study, researchers found, ‘E-cigarette use is prospectively associated with increased risk of combustible tobacco use initiation during early adolescence’” (Leventhal, 2015). Knowing ENDS have become effective nicotine delivery devices and the tobacco industry has a long history of targeting vulnerable populations like youth, e-cigarettes pose a significant risk to public health. In addition, e-cigarettes may lead to primary nicotine addiction among adult nonsmokers and link them to traditional smoking products.

Knowing no form of commercial tobacco use is safe and given the devastating health effects of smoking, policymakers should continue to encourage youth and adults to abstain from tobacco and nicotine. Regulation of e-cigarettes and other ENDS products are crucial both to prevent youth initiation and use of ENDS while protecting the public’s health as a whole. In review of various control measures, community leaders and members are encouraged to draft regulations that include concise verbiage with options for implementation and sustainable enforcement.

The e-cigarette industry is a dynamic one, and the facts around their usage, health effects and impact may change as the products and regulatory environment develop.