

# Health Impact Assessment of a Tobacco Retail License Ordinance in Klamath County



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## Introduction

Currently, Klamath County's health rankings are very low, coming in at 34 out of 34 Oregon Counties in a comprehensive analysis of health outcomes.<sup>1</sup> Tobacco use, obesity, and alcohol abuse are the top three causes of *preventable* death in the U.S., the State of Oregon, and Klamath County, and help explain Klamath County's relatively poor health status.<sup>2,3</sup> Tobacco in particular contributes to many chronic diseases suffered by County residents, including cancer, heart disease, diabetes, and stroke, which drives the continual increase in the costs of health care, both locally and nationally. While the bulk of research on the health effects of tobacco have focused on smoking, research demonstrates that use of smokeless tobacco products also come with significant risk, in large part because of tobacco's primary ingredient, nicotine. In addition to being highly addictive, nicotine is a known toxin with known health risks. Because it is addictive, it also leads to chronic exposure to other known toxins and carcinogens that are present in all tobacco products, including e-cigarettes.<sup>4</sup>

In Klamath County one in five adults smoke cigarettes and over \$34 million dollars are spent every year on tobacco-related medical care.<sup>5</sup> Among Klamath County youth, 13% of 8<sup>th</sup> graders have used tobacco in the past 30 days—nearly double the state average—and 36.6% of 11<sup>th</sup> graders report using tobacco, the highest percentage of all Oregon counties. Youth tobacco use rates are significant because almost 90% of adult smokers begin smoking before they turn 18.<sup>6</sup> Because most chronic tobacco users begin using tobacco as youth, effective strategies to reduce youth tobacco use rates in a community can help reduce overall use rates, improve community health, and reduce the amount of money community members are spending on health care.

### TYPES OF TOBACCO PRODUCTS:

**Smoked** tobacco products are characterized by the burning of tobacco, and the smoke may be inhaled or may be held in the mouth. Common smoked products include:

- Cigarettes, pipes, cigars, and hookahs

**Smokeless** tobacco products include a number of different types of tobacco products used orally or nasally. Common smokeless products include:

- chewing tobaccos, dry snuff, moist snuff, snus, and dissolvables (lozenges, strips, etc.)

**Electronic nicotine delivery systems (ENDS)** work by vaporizing a solution containing nicotine dissolved with flavorants that is inhaled. Common ENDS include:

- e-cigarettes

<sup>1</sup> Robert Wood Johnson Foundation (2015). 2015 County Health Rankings and Roadmaps. Accessed from:

<http://www.countyhealthrankings.org/app/oregon/2013/klamath/county/outcomes/overall/snapshot/by-rank>

<sup>2</sup> Oregon Health Authority (2013). Oregon overweight, Obesity, Physical Activity and Nutrition Facts. Accessed from:

[https://public.health.oregon.gov/preventionwellness/physicalactivity/documents/oregon\\_panfactst\\_2012.pdf](https://public.health.oregon.gov/preventionwellness/physicalactivity/documents/oregon_panfactst_2012.pdf)

<sup>3</sup> US Centers for Disease Control and Prevention (2011). Excess Alcohol Use. Accessed from:

<http://www.cdc.gov/chronicdisease/resources/publications/aag/alcohol.htm>

<sup>4</sup> For summaries of the available research, see: [http://www.cdc.gov/tobacco/basic\\_information/health\\_effects/index.htm](http://www.cdc.gov/tobacco/basic_information/health_effects/index.htm). Accessed 7.30.15

<sup>5</sup> Oregon Health Authority (2013). 2011 and 2013 Klamath County Tobacco Fact Sheets.

<sup>6</sup> U.S. Department of Health and Human Services. (2012). Preventing Tobacco Use among Youth and Young Adults: A Report of the Surgeon General.

Many factors contribute to a youth's decision to use tobacco, including the availability, placement, and marketing of tobacco products. These strategies help create social norms, undermine quit attempts, keep current users addicted, and attract new users.<sup>7</sup> Nationwide, tobacco companies spend \$9 billion dollars annually on marketing efforts, the vast majority (95%) of which is spent on in-store, point-of-sale activities, including price promotions, advertisements, and product placement designed to make their products appealing to everyone, including youth, who come into the store.<sup>8 9</sup> As a rural, low income community, Klamath County is particularly susceptible to the tobacco industry's marketing tactics, as research shows they specifically target rural and impoverished areas. Such communities tend to have the lowest prices and highest percentage of tobacco promotions and advertising.<sup>10 11</sup>



In Oregon alone, the tobacco industry spends \$112 million on advertising. To combat the deleterious effects of tobacco on the community, the CDC's recommended funding allocation for tobacco prevention in Oregon is \$39.9 million, but historically the tobacco prevention budget has been only \$10 million (Figure 1).



<sup>7</sup> National Center for Chronic Disease Prevention and Health Promotion (US) Office on Smoking and Health (2012). "Social, Environmental, and Genetic Influences on the Use of Tobacco among Youth." Accessed from: [www.ncbi.nlm.nih.gov/books/NBK99236/?report=printable](http://www.ncbi.nlm.nih.gov/books/NBK99236/?report=printable).

<sup>8</sup> Federal Trade Commission (2012). 2012 Cigarette Report.

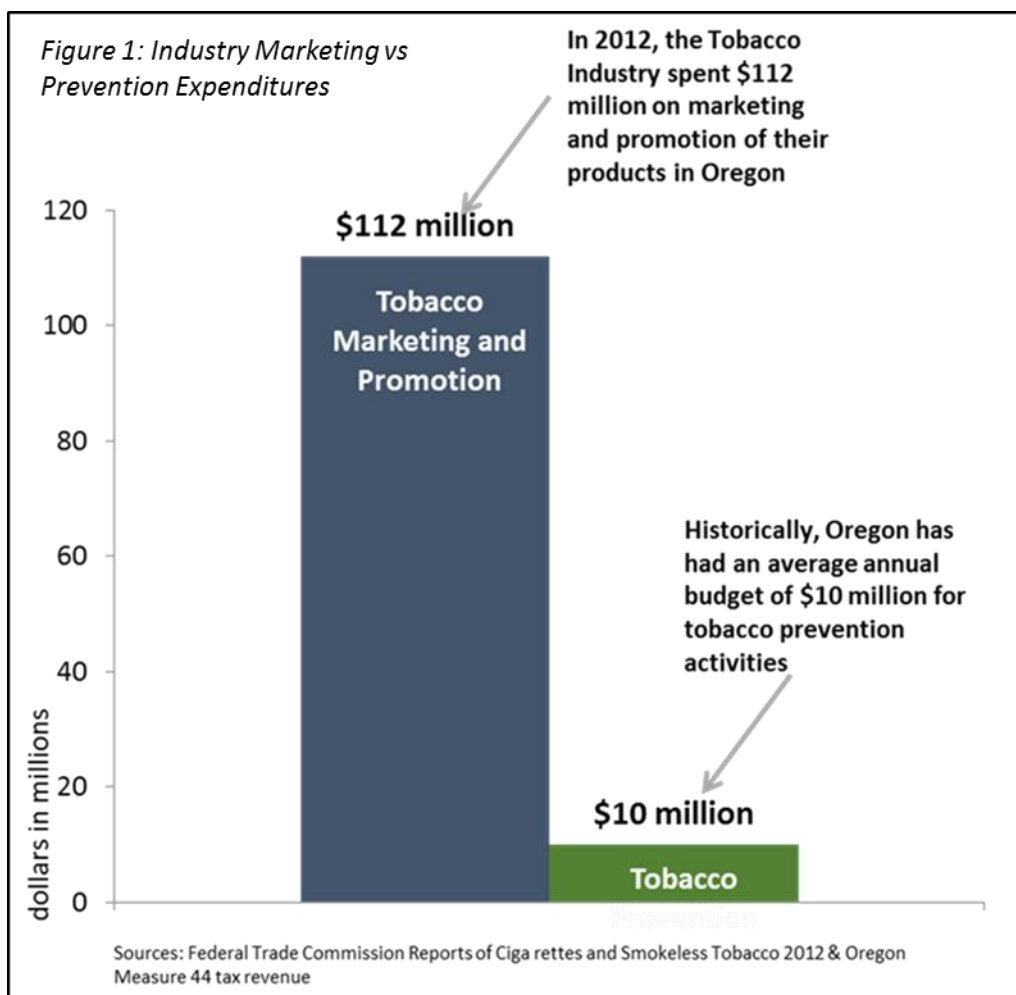
<sup>9</sup> U.S. Department of Health and Human Services. (2012). Preventing Tobacco Use among Youth and Young Adults: A Report of the Surgeon General.

<sup>10</sup> John, R., Cheney, M.K., Azad, M.R. (2009) Point-of-sale marketing of tobacco products: taking advantage of the socially disadvantaged? *Journal of Health Care for the Poor and Underserved*, 20(2)

<sup>11</sup> Ruel, E., Mani, N., Sandoval, A., Terry-McElrath, Y., Slater, S.J., Tworek, C., Chaloupka, F.J., (2004). After the Master Settlement Agreement: trends in the American tobacco retail environment from 1999 to 2002. *Health Promotion Practice*, 5(3 Suppl)



In light of the role that the tobacco retail environment plays in influencing youth use, an increasing number of jurisdictions in Oregon and across the country have begun to develop and implement strategies for limiting the presence and visibility of tobacco in the retail environment. One strategy that is gaining popularity is the development of ordinances requiring tobacco retailers to be licensed and to meet certain requirements in order to maintain their license. To date, two counties in Oregon, Lane and Benton, have passed Tobacco Retail Licensing (TRL) ordinances, as have eight cities: Eugene, Springfield, Corvallis, Salem, Philomath, Central Point, Silverton, and Ashland.<sup>12</sup>



Klamath County currently does not have a TRL ordinance in place. While there are state and federal laws that prevent the sale of tobacco to minors, there are no other rules or guidelines in place to limit the retail marketing efforts that appeal to minors. The purpose of this Health Impact Assessment (HIA) is to provide information for decision-makers and stakeholders in Klamath County as they consider not only whether to develop and adopt a tobacco retail license ordinance that would help reduce tobacco use rates among youth, but also what the components of this ordinance should be. It does so by looking at the research on the effectiveness of different possible ordinance components, and by considering qualitative input from local stakeholders, including elected officials, tobacco retailers, and youth. In addition to presenting findings, this HIA provides recommendations for developing an ordinance that effectively helps reduce youth tobacco use rates in Klamath County.

<sup>12</sup> Pizacani, B., Murray, S., & Aird, K. (2012). Statewide tobacco retail licenses: Old youth access policy or new tobacco control policy? The Oregon assessment.



The ordinances enacted by other jurisdictions in Oregon and elsewhere vary greatly in terms of their content and effectiveness. In some cases, the ordinances simply require businesses to obtain a license in order to help the jurisdiction maintain a comprehensive list of tobacco retailers. Often, businesses have to pay a licensing fee that can help cover the costs of maintaining the licensing program, as well as possibly supporting enforcement and education efforts. Additional components range from prohibitions on price promotions and flavored products to location restrictions. Based on the effectiveness of the different components and their suitability for Klamath County, this HIA will focus on assessing the impacts of the following possible components of a tobacco retail license ordinance:

1. A required retail license with an associated fee that covers the costs of the licensing program and improved enforcement of sales-to-minor laws;
2. Density restrictions such as a certain maximum number of retailers per square mile that would limit the number of tobacco retailers located within a community; and
3. School buffer zones that prevent new retailers from locating near schools.

## **What is an HIA?**

Health impact assessment (HIA) is a methodology developed by public health professionals in order to facilitate efforts to explicitly consider and address the potential direct and indirect health impacts of proposed plans, policies, and projects.<sup>13</sup> HIAs come in many shapes and sizes, from “rapid” HIAs, such as this one, done over a few months, to more comprehensive multi-year studies. In all cases, the primary objective is to provide information about health impacts that will be useful to stakeholders and decision-makers as they weigh choices. The information used in HIAs can range from original research to qualitative input from local stakeholders based on local knowledge.

This HIA has six goals:

1. Provide evidence-based recommendations to aid decision-makers in understanding potential health impacts on Klamath County community members, particularly minors, and tradeoffs of tobacco control regulation prior to their decisions regarding the pursuit of policy change in Klamath County.

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<sup>13</sup> A more complete overview of HIA practice, including tools and resources, can be found on the Oregon Health Authority’s HIA program webpage: <http://public.health.oregon.gov/HealthyEnvironments/TrackingAssessment/HealthImpactAssessment/Pages/index.aspx>



2. Promote consideration of health and community economic cost impacts of tobacco consumption, as well as the risks among vulnerable populations within Klamath County (particularly minors).
3. Provide the opportunity for community stakeholders and decision-makers to provide feedback about tobacco control regulation and its potential implementation within Klamath County.
4. Strengthen the capacity within the Klamath County Public Health Division to utilize the HIA process for other public health decisions impacting Klamath County.
5. Build and strengthen relationships between Klamath County Public Health and regional governing and planning bodies.
6. Promote HIA practice in Klamath County.

It is important to note that this HIA is a “rapid” HIA meant to begin to inform discussions and initial decisions about how to design a tobacco retail license ordinance that would effectively reduce youth tobacco use rates. Unlike a “comprehensive” HIA that can take a year or more and typically involves significant stakeholder engagement and research, rapid HIAs often include limited stakeholder engagement and focus on using existing research to key issues of concern and develop findings and recommendations. The bulk of the information gathering was done by students from Oregon Institute of Technology under the supervision of Sophia Lyn Nathenson, Ph.D., Assistant Professor of Medical Sociology, in OIT’s Department of Humanities and Social Sciences, with support from Klamath County Public Health and the Oregon Public Health Institute. While the information presented here is based on sound research, this study should not be considered a formal research project.

### **About This Report**

This report has three sections. The first section provides a demographic overview of Klamath County, the tobacco retail environment in Klamath County, and youth tobacco use rates at Klamath County schools. The second section summarizes the scope of the HIA and how it was developed. The final section describes the assessment methodology and provides the findings and recommendations.

### **Study Area Overview and Demographics**

Klamath County was established in 1882. It is located in Southern Oregon on the California border. Incorporated cities in Klamath County include Klamath Falls, Merrill, Malin, Bonanza, and Chiloquin.



## **Population**

Klamath County had a population of 66,680 according to the 2010 census. The median age of residents is 42. The majority of the population lives in the city of Klamath Falls (31%), adjacent unincorporated Altamont (29%), and additional unincorporated areas near Klamath Falls (13%). Additional inhabited geographic areas are Chiloquin (7%), Crescent Lake (5%), Keno (5%), Malin (2%), Merrill (3%), and Langell/Yonna/Poe Valley (5%).<sup>14</sup>

## **Race and ethnicity**

The majority (85.9%) of Klamath County residents are white. The minority populations are as follows: 10.4% are Hispanic or Latino, 4.1% American Indian or Alaskan Native, <1% African American, 1% Asian or Pacific Islander, and 4.1% some other race. The three tribal affiliations of Klamath County American Indians are Klamath, Modoc, and Yahooskin.<sup>15</sup>

## **Industry**

Historically, Klamath County's economy has been based on timber and agriculture, though these industries now represent only a small portion of the county's economic activity. In March 2012 there were:

- 241 retail establishments in the county that employed 2,937 employees
- 200 health and social assistance establishments employed 2,933
- 173 accommodation and food service establishments employed 1,984
- 156 construction establishments employed 607
- 125 scientific/technical establishments employed 629

Retail employees had some of the lowest annual median earnings as just under \$20,000 (there is no distinction between full and part time employees here).

## **Employment/income**

Klamath County had a 7.9% unemployment rate according to the 2013 community survey. 49.4% were in the civilian workforce, <1% were employed by the armed services, and 42.2% were not in the labor force. The most common industries for employment are education, health care, and social assistance (23% of jobs), manufacturing (11%), retail (12%), and arts/recreation/food service (10%). The median family

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<sup>14</sup> <http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?src=CF>

<sup>15</sup> <http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?src=CF>

income is \$48,896 and 22.7% of families with children under the age of 18 have an annual income below the poverty level.<sup>16</sup>

## **Government**

The county is represented by Republicans in the state senate and house. Since 1968, residents have overwhelmingly voted Republican in presidential elections. There are six total general purpose governments in Klamath County (one county and five sub-county). There are 75 total special purpose governments (72 districts and 3 school districts).<sup>17</sup>

## **Education**

87.7% of Klamath County residents are high school graduates. 19.7% have a bachelor's degree or higher, while 7% of the 25 and over population had a graduate degree or higher. 90.5% of students enrolled in school (kindergarten to 12 grade) are attending public school, with the remainder attending private school. There are three independent school districts in Klamath County.<sup>18</sup>

## **The tobacco retail environment**

Oregon is one of only nine states that do *not* require tobacco retailers to operate under a license or permit<sup>19</sup>. While this does not exempt retailers from state and federal laws addressing tobacco retail, it makes it difficult for the state to know who is selling tobacco and limits the state's ability to work with retailers to ensure that they are adhering to existing laws.<sup>20</sup>

It is illegal to sell tobacco to minors under 18 years of age, but when Klamath County is put to the test it repeatedly falls short. To test tobacco retailers' compliance with the federal Synar Amendment, which requires states to have laws prohibiting the sale of tobacco products to minors, Oregon annually conducts random checks by sending in adolescent decoys to try to purchase tobacco.<sup>21</sup> Nationally, it takes teens an average of 10 attempts before successfully purchasing tobacco—in Oregon it takes less than 5. In Klamath County it takes only 3 attempts, making Klamath one of the easiest counties for minors to successfully purchase tobacco.

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<sup>16</sup> <http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?src=CF>

<sup>17</sup> <http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?src=CF>

<sup>18</sup> <http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?src=CF>

<sup>19</sup> Center for Disease Control and Prevention, Office on Smoking and Health (2015). Smoking and Tobacco Use. Accessed from: <http://apps.nccd.cdc.gov/statesystem/ComparisonReport/ComparisonReports.aspx?TopicID=604&MeasureID=645&MeasureSeq=1>

<sup>20</sup> For a detailed summary of Oregon's Tobacco Laws and Policies, see: Tobacco Prevention and Education Program (2014). *Oregon Tobacco Laws*. Portland, OR: Oregon Health Authority, Oregon Public Health Division. Available on-line at: <https://public.health.oregon.gov/PreventionWellness/TobaccoPrevention/Documents/tobfacts.pdf>

<sup>21</sup> The Synar Amendment requires states to have laws in place prohibiting the sale and distribution of tobacco products to persons under the age of 18 and to enforce those laws effectively. See: <http://www.samhsa.gov/synar/about>



In 2014, Klamath County Public Health conducted an assessment of the county’s tobacco retailers. A total of 72 tobacco retailers were identified and 59 of them participated in the assessment. As Table 1 indicates, the vast majority of retailers are convenience stores.

<b>Table 1. Number of Tobacco Retail Outlets Assessed by Store Type</b>		
<i>STORE TYPE</i>	<i>NUMBER OF STORES</i>	<i>PERCENT OF STORES</i>
Convenience Store- with or without gas	35	59%
Grocery Store	13	22%
Tobacco Shop	4	7%
Mass Merchandiser	3	5%
Liquor Store that sells tobacco	2	3%
Drug Store or Pharmacy	1	2%
Other (kiosk, specialty store etc.)	1	2%
<b>TOTAL</b>	<b>59</b>	<b>100%</b>

## Klamath County Tobacco Retail Assessment

The tobacco industry pays for advertising to build brand recognition and promote the social norm that tobacco is prevalent and acceptable. An observational assessment of tobacco retail environments conducted by KCPH in 2014 found that over 1 in 4 retailers displayed a tobacco product within 12 inches of toys, candy, gum, soda machine, or ice cream and 1 in 3 displayed advertisements within 3 feet of the floor, at child’s eye level.<sup>22</sup>

A newer product that is gaining popularity is the electronic cigarette, or e-cigarette, which belongs to a new category of tobacco products called “electronic nicotine delivery systems” (ENDS). E-cigarettes were found in 60% of Klamath tobacco retail stores in 2014. E-cigarettes work by vaporizing a solution containing nicotine dissolved with flavorants (“juice”) that is inhaled. Electronic cigarettes are not yet regulated by the Federal Drug Administration and have yet to be approved as a smoking cessation device. These products are very appealing to youth in their wide variety of fruit/candy flavors and their inconspicuous size<sup>8</sup>. Their ability to attract

minors is demonstrated in their increasing use. The CDC reported that use of electronic cigarettes among youth has doubled from 2011 to 2012, resulting in 1.78 million high school students having used electronic cigarettes<sup>23</sup>. In Oregon between 2011 and 2013, use of e-cigarettes among Oregon eleventh graders has almost tripled, from 1.8% to 5.2%. In Klamath County, 3.3% of 8<sup>th</sup> graders and 8.7 % of 11<sup>th</sup> graders have smoked an electronic cigarette within the past 30 days.<sup>8,24</sup> Fortunately, the 2015 Oregon legislature passed a bill prohibiting the sale of e-cigarettes to minors.



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<sup>22</sup> Klamath County Public Health (2014). 2014 Klamath County Tobacco Retail Assessment.

<sup>23</sup> US Centers for Disease Control and Prevention (2013). Notes from the Field: Electronic Cigarette Use Among Middle and High School Students- United States 2011-2012 *Morbidity and Mortality Weekly Report*: 62(35)

<sup>24</sup> Oregon Health Authority (2013). 2013 Oregon Healthy Teens Survey



### **Tobacco use and retail proximity for Klamath Falls Schools**

Klamath Falls has 35 schools. 23.7% of residents are age 19 or younger<sup>25</sup>

Table 2 below lists schools in Klamath County, as well as the results of the 2014 Student Wellness Survey's tobacco and nicotine topics (when available).

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<sup>25</sup> 2010 Census. <http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?src=CF>

**Table 2. Student tobacco use in the past 30 days at Klamath County Schools (2014 Student Wellness Survey)**

	Cigarettes	Other tobacco products	Hookah
Bonanza Elementary (6th graders)	0.0%	0.0%	0.0%
Bonanza Junior/Senior High School (11th graders)	6.7%	26.7%	13.3%
Brixner Junior High (8th graders)	5.1%	5.2%	5.2%
Chiloquin Elementary (6th graders)	7.1%	0.0%	0.0%
Chiloquin Junior/Senior High School (11th graders)	20.0%	6.7%	6.7%
Falcon Heights Academy	NA		
Ferguson Elementary (6th graders)	3.8%	1.9%	0.0%
Gearhart Elementary			
Gilchrist Junior/Senior High School (8th graders)	0.0%	0.0%	0.0%
Henley Elementary (6th graders)	0.0%	1.9%	0.0%
Henley High (11th graders)	9.3%	10.3%	23.6%
Henley Middle School (8th graders)	10.6%	9.3%	0.0%
Keno Elementary (6th graders)	0.0%	0.0%	0.0%
Lost River Junior/Senior High School (11th graders)	0.0%	29.3%	8.2%
Malin Elementary (6th graders)	0.0%	0.0%	0.0%
Mazama High (11th graders)	16.8%	14.9%	37.0%
Merrill Elementary	NA		
Peterson Elementary (6th graders)	0.0%	0.0%	0.0%
Sage Community School	NA		
Shasta Elementary (6th graders)	2.2%	2.2%	0.0%
Stearns Elementary (6th graders)	0.0%	0.0%	0.0%
Public City of Klamath Falls School District	NA		
Conger Elementary	NA		
<i>Klamath Union High School (11th graders)</i>	9.6%	8.1%	28.7%
Mills Elementary	NA		
Pelican Elementary	NA		
Ponderosa Middle School (6th graders)	3.4%	2.0%	0.0%





**Table 2. Student tobacco use in the past 30 days at Klamath County Schools (2014 Student Wellness Survey)**

	Cigarettes	Other tobacco products	Hookah
Roosevelt Elementary			NA
Private Schools			
Adventist Christian School			NA
<i>Hosanna Christian School</i>			NA
Integral Youth Services Step-Through School			NA
Klamath Youth Development Center			NA
Klamath/Lake County Youth Ranch			NA
The Triad School			NA
Alternative			
Link River High School			NA
Charter			
Eagle Ridge High School			NA

## Scoping summary

The scope of this HIA was developed over the course of several meetings, with consideration of possible pathways informed by preliminary research conducted by KCPH staff and student researchers from the Oregon Institute of Technology. Initially, KCPH staff and the OIT team met with Oregon Health Authority's HIA Program Coordinator to create a comprehensive list of possible pathways to explore. The team worked with KCPH staff to identify preliminary research and various types of tobacco control ordinances that have been implemented in Oregon and nationwide. The initial set of possible ordinance components included:

- Tobacco Retail Licensing and Registration
- Restrict tobacco within one mile of schools
- Zoning (tobacco retailer density): Cannot have more than X number of tobacco retailers per square mile
- Banning sale of flavored tobacco
- Banning flavored e-cigarettes
- Sampling Bans
- Tobacco Coupon Restriction
- Tobacco Tax Increase
- Restricting sale of e-cigarettes to minors

For each component, the HIA Team detailed the possible connections to health (see Appendix A) to help consider their options.

The list of possible ordinance components was then narrowed based on some initial research and the HIA team's assessment of the feasibility of different components in Klamath Falls or Klamath County. Feasibility was determined in part by professional judgment and experiences from other jurisdictions concerning the possibility of lawsuits from tobacco companies, each component's impact on youth smoking rates and the likelihood of local support, the presence of similar ordinances in other Oregon counties, and availability of sufficient evidence to support the topic.

A key component that was removed from consideration through this process was the tobacco tax, which was omitted because Oregon law currently prevents local jurisdictions from creating their own



tobacco taxes. Other restrictions were also disregarded because of uncertainties about technical feasibility, as well as the need to keep the scope manageable for the project timeline and resources.

Based on these efforts, the HIA team chose to primarily focus on assessing the potential impacts of a retail licensing fee, a retail density cap, and a school buffer. Figure 2 details the possible connections between these ordinance components and health that would be assessed.

Some key characteristics of the retail licensing would be:

1. Required for all businesses wanting to sell tobacco;
2. Higher fee for retailers who are caught selling tobacco to minors or the license may be suspended or revoked;
3. Fee used for education and enforcement programs designed to stop retailers from selling tobacco products to minors;
4. Only available to retailers more than a certain distance (i.e. 1,000 or 5,000 feet) away from schools. Current retailers closer than that buffer would be grandfathered in, but new retailers within the buffer zone would not be able to obtain a license and thus could not sell tobacco products; and
5. License to be granted under the contingency that density per square mile has not already reached the cap.

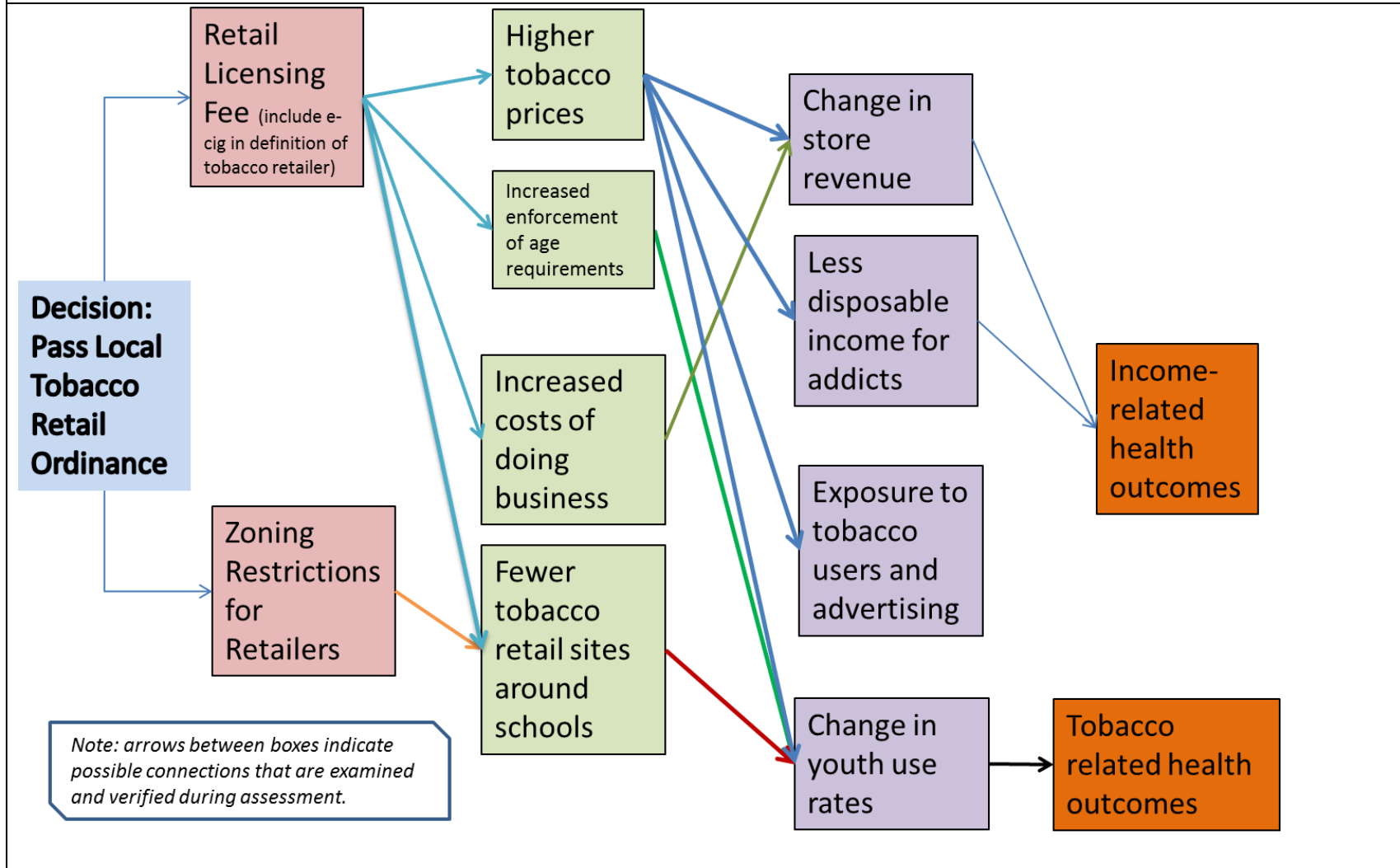
### **Vulnerable populations:**

Youth are the primary vulnerable group this HIA is concerned with. Oregon is one of the easiest states for youth to illegally purchase tobacco from retailers. Youth are particularly vulnerable to the health effects of tobacco because their bodies are still developing, they are more susceptible to developing addictions due to their heightened neuronal sensitivities to nicotine, and because starting tobacco use at an early age means more tobacco use over their life course. Furthermore, youth are highly susceptible to marketing tactics and begin building brand recognition at an early age.<sup>26</sup>

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<sup>26</sup> U.S. Department of Health and Human Services. (2012). Preventing Tobacco Use among Youth and Young Adults: A Report of the Surgeon General.

**FIGURE 2: Tobacco Ordinance HIA Pathway Diagram**





## **Findings: Assessment**

The purpose of this section is to build off of the scoping phase by assessing the potential impacts of the adoption of a tobacco retail license (TRL) ordinance in Klamath County. As detailed in the scoping section, while a TRL ordinance can contain many components designed to minimize youth tobacco use rates, this HIA focuses on assessing the potential impacts of three possible components:

1. A required retail license with an associated fee that would cover the costs of the licensing program and improved enforcement of sales-to-minor laws;
2. Density restrictions such as a certain maximum number of retailers per square mile that would limit the number of tobacco retailers located within a community ; and
3. School-based location restrictions (buffers) that would prevent new retailers from locating near schools.

Based on our research during the scoping phase, we identified three main pathways by which these components could impact health:

- I. Price of Tobacco: Increased prices for tobacco products, thus reducing sales (because increased price is associated with decreased sales)
- II. Enforcement of Age Requirements for Purchasing Tobacco Products: Reduced sales to minors
- III. Exposure to tobacco retailers: Decreased exposure to tobacco products and marketing

This assessment report is organized according to these pathways. For each pathway, we present existing conditions information for Klamath County, then provide information about the potential health impacts for Klamath County youth.

## **Assessment Methodology**

Assessment for this HIA focused on delineating the connections between the pathways listed above and youth health, and on determining the potential for the hypothetical ordinance to impact the health of youth by altering these pathways. Assessment was based primarily on examination of existing datasets containing relevant information about tobacco use and the tobacco retail environment in Klamath County, and on literature reviews performed by the OIT students. Literature reviews were conducted using academic databases, local health department community assessments, and Oregon Health Authority reports, and focused primarily on identifying relevant peer-reviewed research or evidence-based research produced by public agencies or credible non-profit research organizations. The HIA project team also solicited references and resources from the Oregon Health Authority's Health Promotion and Chronic Disease Prevention Program staff.

In addition to examining existing datasets and reviewing relevant research, the OIT students interviewed four owners/managers of stores that sold tobacco in order to get a better sense of how they might be impacted by an ordinance. The research team wanted diverse opinions so they selected two local and two corporate tobacco retailers. Questions were selected to elicit genuine feedback about tobacco control policies and their perceptions about what local adoption of proposed policies might look like in Klamath. Students were asked to make the interview more casual and conversational, while still addressing the questions developed. The interview questions are in Appendix B.

The HIA team also reviewed the results of some youth focus groups that were recently conducted by nursing students from Oregon Health Sciences University (OHSU), Klamath Falls Campus, at four different high schools in Klamath County. Given the small sample size and the informal nature of the interviews and focus groups, the observations and opinions expressed by participants cannot be taken as representative, but are useful for highlighting issues or concerns that might need to receive further consideration as Klamath County decision-makers continue to consider the development and adoption of a tobacco retail licensing program.

### **Overview: Tobacco use and youth health**

According to the Campaign for Tobacco-Free Kids, 90% of people who smoke tobacco begin at or before age 18. Although youth use rates have declined nationwide in recent years, there are still more than 3,800 new underage daily smokers each year<sup>27</sup>. According to current estimates, about one-third of them will die prematurely from smoking-caused disease such as cancer and heart disease and a host of short and long term respiratory health issues. As previously mentioned, smoking remains the leading cause of preventable death in the United States and one of the primary contributors to a wide range of diseases and disorders, including cancer, heart disease, asthma, diabetes, birth defects, reduced fertility, impotence, stress, and macular degeneration, to name a few.<sup>28</sup>

Importantly, while smoking rates among youth have declined, use of smokeless tobacco products has been steadily increasing since the 1970s. In Oregon from 1970 to 1991, the regular use of smokeless tobacco by 18 to 24 year old men increased from less than 1% to 6.2%. In Klamath County, as of 2013, 21.7% of male 11<sup>th</sup> graders reported using smokeless tobacco products, which is more than double the

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<sup>27</sup> U.S. Department of Health and Human Services. (2012). Preventing Tobacco Use among Youth and Young Adults: A Report of the Surgeon General.

<sup>28</sup> Campaign for Tobacco-Free Kids (2015) Factsheet: Tobacco Harm to Kids, Accessed from: <http://www.tobaccofreekids.org/research/factsheets/pdf/0077.pdf>



state average<sup>29</sup>. Similar to cigarettes, smokeless tobacco is associated with an increased risk of multiple health issues including oral cancer, tooth decay, nicotine addiction, and an increased likelihood of also smoking tobacco.<sup>30</sup>

Flavored tobacco products are a major concern because they are specifically attractive to youth, encouraging experimentation and initiation. For example, these products come in kid-friendly flavors such as bubble gum, cookie dough, and razzle dazzle that mask that harshness of regular tobacco and make them seem less dangerous. Their bright colors and packaging are placed at youth eye level or in locations near candy or the register—places youth frequent. These products have come to be known as “tobacco candy”<sup>31</sup>. While cigarettes are no longer allowed to contain flavors other than menthol, other tobacco products such as smokeless, cigars/cigarillos, hookah, and e-cigarettes are increasingly appearing in flavored varieties. Increases in the use of these flavored products threaten to offset declines in cigarette use, especially among youth.

## **I. Price of Tobacco Products**

### **Finding #1: Price increases for tobacco products lead to lower rates of tobacco use by all users, including youth.**

The connection between the price of tobacco products and tobacco use rates has been well-established by numerous academic studies. When the price of cigarettes—the most frequently studied tobacco product—go up, fewer people start smoking, more smokers reduce tobacco use or stop smoking altogether, and fewer former smokers resume smoking. Compared with adults, youth are particularly

responsive to price increases. As the US Surgeon General’s office noted in 2012, teens are three times more responsive to tobacco price increases when compared to adults. Thus, “increasing the price of tobacco products would decrease the prevalence of tobacco use, particularly among minors and young adults.”<sup>32</sup> For example, a 10% increase in the price of tobacco products will reduce overall consumption

Currently in Klamath  
County:  
The average price of  
regular cigarettes is  
\$4.76 per pack.

<sup>29</sup> Oregon Health Authority. (2013). Tobacco Facts: Other Products. Accessed from:

[http://public.health.oregon.gov/PreventionWellness/TobaccoPrevention/Documents/tobacco\\_facts/other\\_tobacco\\_products.pdf](http://public.health.oregon.gov/PreventionWellness/TobaccoPrevention/Documents/tobacco_facts/other_tobacco_products.pdf)

<sup>30</sup> Campaign for Tobacco-Free Kids (2015). Factsheet: Smokeless Tobacco and Kids, Accessed from:

<http://www.tobaccofreekids.org/research/factsheets/pdf/0003.pdf>

<sup>31</sup> Oregon Health Authority. (2013). Tobacco Facts: Other Products. Accessed from:

[http://public.health.oregon.gov/PreventionWellness/TobaccoPrevention/Documents/tobacco\\_facts/other\\_tobacco\\_products.pdf](http://public.health.oregon.gov/PreventionWellness/TobaccoPrevention/Documents/tobacco_facts/other_tobacco_products.pdf)

<sup>32</sup> U.S. Department of Health and Human Services. (2012). Preventing Tobacco Use among Youth and Young Adults: A Report of the Surgeon General.



rates by 3-5%<sup>33</sup>. Since youth are more susceptible to price increases, their use rates would decrease even more. According to another study, a 10% increase in the price of tobacco products would decrease tobacco use by youth ages 12-17 by 11.9%.<sup>34</sup>

While youth in general are more susceptible to price increases, certain youth groups would be more impacted than others. Research indicates that low-income and minority youth are even more sensitive to price changes than other youth groups.<sup>35</sup> Their sensitivity is important to recognize because they have higher rates of tobacco use than other groups and thus bear a higher burden of disease related to multiple factors, including tobacco use.

### **Finding #2: A licensing fee by itself would probably not impact the price of tobacco products.**

While an ordinance could require tobacco retailers to pay a licensing fee to cover the costs of implementing and enforcing the ordinance, the ordinance could not require retailers to cover the costs of the license by raising tobacco prices because this would amount to a tax on tobacco, which is prohibited by state law. While it is possible that retailers could cover the licensing costs by raising the prices of tobacco products, no research was found indicating that retailers would increase tobacco prices to cover the costs of the license, which can range greatly from about \$30/year to \$1,500/year.<sup>36</sup> Indeed, existing research indicates that retailers have often responded to tobacco taxes or higher wholesale prices by partially reducing their profit margin from tobacco and adjusting prices for other goods.<sup>37</sup>

### **Finding #3: A licensing fee would be unlikely to discourage retailers from selling tobacco or result in lost revenue**

A potential side-effect of higher tobacco prices that the HIA team considered is lost revenue for retailers that might result from having to pay a licensing fee. While no studies have been conducted on the impact of licensing fees on store revenue, studies that have assessed the impact of tobacco taxes on store revenue have found minimal impact because retailers are able to raise tobacco prices and/or adjust the prices of other store items to offset any lost revenue from tobacco sales.<sup>38</sup> Contrary to some claims, higher cigarette

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<sup>33</sup> Centers for Disease Control and Prevention (2015). Economic Facts about U.S. Tobacco Production and Use.

[http://www.cdc.gov/tobacco/data\\_statistics/fact\\_sheets/economics/econ\\_facts/](http://www.cdc.gov/tobacco/data_statistics/fact_sheets/economics/econ_facts/)

<sup>34</sup> USDA Economic Research Service; US Bureau of Labor Statistics. (2007). Tax Burden on Tobacco.

<sup>35</sup> ChangeLab Solutions (2013). Model Legislation Establishing a Minimum Retail Sales Price for Cigarettes and Other Tobacco Products.

<sup>36</sup> ChangeLab Solutions (2013). Model Legislation Establishing a Minimum Retail Sales Price for Cigarettes and Other Tobacco Products

<sup>37</sup> Ribisl, KM, Evans, WN, & Feighery, EC, (2011). "Falling cigarette consumption in the U.S. and the impact upon tobacco retailer employment," in Bearman, P, Neckerman, KM, & Wright, L, eds., *After Tobacco: What would happen if Americans stopped smoking?*, New York: Columbia University Press, 2011.

<sup>38</sup> Huang, J., & Chaloupka, F. J. (2013). The economic impact of state cigarette taxes and smoke-free air policies on convenience stores. *Tobacco control*, 22(2).



taxes do not negatively impact revenue for convenience stores.<sup>39</sup> Because licensing fees would be substantially lower than a tax, it is quite unlikely that a licensing fee would result in lost revenue for retailers.

The HIA team also examined whether higher tobacco prices would potentially cause retailers to stop selling tobacco, but this also appears to be very unlikely. Tobacco retailers in Klamath County currently make a net profit of approximately \$1.31 per pack after tax and wholesale prices.<sup>40</sup> Even if reduced sales related to increased prices cut into their profits, they would still make money from tobacco sales. In addition, as one interviewed retailer pointed out, many customers who come to their store primarily to buy tobacco often end up buying other goods. Even if tobacco sales were not profitable by themselves, the fact that they lead to the sale of other goods would likely give retailers enough reason to continue to sell tobacco. Furthermore, the retailers interviewed said the cost of the license would not push them to raise their prices, or quit selling tobacco, because “it’s just the cost of doing business”.

## **II. Enforcement of Age Requirements for Purchasing Tobacco Products**

### **Finding #4: It is relatively easy for youth in Klamath County to purchase tobacco from retail outlets**

There are both state and federal laws that prevent the sale of tobacco products to minors. The federal Food and Drug Administration (FDA) responsible for enforcing federal laws preventing retailers from selling tobacco to minors. They enforce these laws primarily by conducting inspections of randomly selected retailers. When they catch retailers selling tobacco to a minor, they issue a warning letter that requires the retailer to state what they will do to prevent their employees from doing so again in the future. If they continue to sell tobacco to minors, then they could be fined or issued a no sale order.<sup>41</sup> In addition, the Synar program, under the Synar Amendment, performs additional inspections, which are reported for surveillance but are not associated with retailer fines or penalties.<sup>42</sup>

Currently in Klamath County: Synar non-compliance rate for 2013-2014 was 22% and the five year average from 2009-2014 was 39%.

The state of Oregon also has multiple laws designed to prevent minors from being able to purchase tobacco. These laws:

<sup>39</sup> Huang, J., & Chaloupka, F. J. (2013). The economic impact of state cigarette taxes and smoke-free air policies on convenience stores. *Tobacco control*, 22(2).

<sup>40</sup> Federation of Tax Administrators (2015). State Excise Tax Rates On Cigarettes. Accessed from: <http://www.taxadmin.org/fta/rate/cigarette.pdf>

<sup>41</sup> [http://www.accessdata.fda.gov/scripts/oc/inspections/oc\\_insp\\_searching.cfm](http://www.accessdata.fda.gov/scripts/oc/inspections/oc_insp_searching.cfm)

<sup>42</sup> Substance Abuse and Mental Health Services Administration (2015). Retrieved from <http://www.samhsa.gov/synar/about>

- prohibit vending machines to be located in places where minors are allowed;
- prohibit distribution of free tobacco products to persons under 18, and free smokeless tobacco products to persons under 21;
- require retailers to post a notice informing the public that selling tobacco to minors is prohibited;
- as of May 27, 2015, prohibit use, possession, and purchase of tobacco and inhalant delivery systems, including e-cigarettes, by minors; and
- require vendor-assisted sales unless store is off limits to minors.

As with federal laws prohibiting the sale of tobacco to minors, the state laws are enforced through inspections programs. Importantly, when a store is caught making a sale to a minor, the clerk, not the business owner, is fined up to \$500. According to a recent assessment of Oregon’s inspection and fine-based approach to preventing tobacco sales to minors, there is room for improvement. As it states, “Compliance rates need to be in the 90% range in order to have a substantial effect on youth smoking.”<sup>43</sup> Unfortunately, Oregon rates have been higher than 85% only four times. In other words, insufficient enforcement and weak penalties are making it too easy for minors to purchase tobacco products from retailers in Oregon. This fact was recently echoed by high school students participating in a series of youth focus groups conducted by OHSU nursing students. According to some participants, it is very easy to purchase tobacco from retailers in Klamath County and many youth do purchase tobacco themselves.<sup>68</sup> While this may seem discouraging, it also means that improved enforcement efforts could be particularly effective in Klamath County.

#### **Finding #5: Effective enforcement of sales-to-minors laws, when coupled with other youth focused education and encouragement efforts, can reduce youth tobacco use rates**

According to research, when paired with other efforts such as community mobilization activities (i.e., school-based education and encouragement), effective enforcement of existing laws is an effective strategy in reducing tobacco use rates among youth.<sup>44 45 46 47 48</sup> However, in order for enforcement to be

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<sup>43</sup> Pizacani, B., Murray, S., Aird, K. (2012) Statewide Tobacco Retail Licensing: Old Youth Access Policy or New Tobacco Control Policy? The Oregon Assessment. Oregon Health Authority.

<sup>44</sup> Richardson, L., Hemsing, N., Greaves, L., Assanand, S., Allen, P., McCullough, L., & Amos, A. (2009). Preventing smoking in young people: a systematic review of the impact of access interventions. *International Journal of Environmental Research and Public Health*, 6(4)

<sup>45</sup> Stead, L. F., & Lancaster, T. (2005). Interventions for preventing tobacco sales to minors. The cochrane library.

<sup>46</sup> Cummings K. Evaluation of an Enforcement Program to Reduce Tobacco Sales to Minors (1999). *American Journal of Public Health*. 88(6).

<sup>47</sup> Richardson, L., Hemsing, N., Greaves, L., Assanand, S., Allen, P., McCullough, L., & Amos, A. (2009). Preventing smoking in young people: a systematic review of the impact of access interventions. *International journal of environmental research and public health*, 6(4), 1485-1514.

<sup>48</sup> Chaloupka, F. J., & Grossman, M. (1996). Price, tobacco control policies and youth smoking (No. w5740). National Bureau of Economic Research.



most effective, penalties such as increasingly severe fines and the potential for the loss of the ability to sell tobacco need to be available to enforcement officials.<sup>49 50</sup>

Since Oregon does not require tobacco retailers to obtain a license, implementing an ordinance to require one to sell tobacco could help enforcement efforts primarily by creating the possibility that the license could be suspended or revoked if the retailers are found to be selling to minors or breaking any other local, state, or federal laws regulating tobacco retail. According to many agencies and officials in charge of enforcing Oregon's existing tobacco retail laws, having such a penalty available would effectively discourage many retailers and their employees from selling tobacco to minors.<sup>51</sup> In an evaluation of the effects of tobacco retail licensing in Grass Valley, California, it was found that there was 100% compliance to the licensing rules among tobacco retailers two years after implementation.<sup>52</sup>

In addition, according to one study, one of the strongest predictors of smoking initiation in youth is perception of easy access.<sup>53</sup> Based on the impression of easy access voiced by Klamath County youth and the relative ease that Klamath County youth have in purchasing tobacco from retailers, it appears that Oregon's lax enforcement efforts are contributing to a perception of easy access. It is likely that this perception is at least in part responsible for Klamath County's relatively high tobacco use rates. However, it also means that changing this perception through improved enforcement that includes the possibility of revoking a retailer's license to sell tobacco would effectively contribute to changes perceptions and reduced youth tobacco access rates.

### **III. Exposure to tobacco retailers and advertising**

#### **Finding #6: Youth living in close proximity to tobacco retail outlets are more likely to use tobacco**

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<sup>49</sup> Richardson, L., Hemsing, N., Greaves, L., Assanand, S., Allen, P., McCullough, L., ... & Amos, A. (2009). Preventing smoking in young people: a systematic review of the impact of access interventions. *International journal of environmental research and public health*, 6(4), 1485-1514.

<sup>50</sup> Cummings K. Evaluation of an Enforcement Program to Reduce Tobacco Sales to Minors. *American Journal of Public Health*. 1999;88(6):932-936.

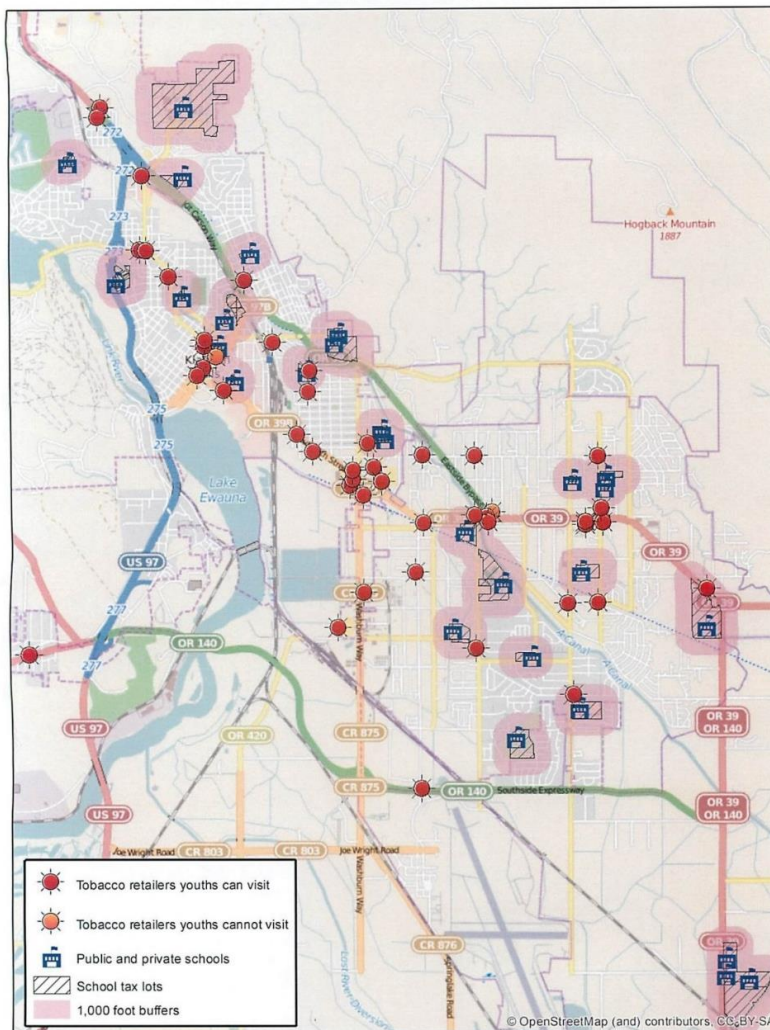
<sup>51</sup> Pizacani, B., Murray, S., & Aird, K. (2012). Statewide tobacco retail licenses: Old youth access policy or new tobacco control policy? The Oregon assessment. Provided by Oregon Health Authority

<sup>52</sup> Grass Valley TRL Evaluation, Nevada County Public Health, 2015.

<sup>53</sup> Robinson, L. A., Klesges, R. C., Zbikowski, S. M., & Glaser, R. (1997). Predictors of Risk for Different Stages of Adolescent Smoking in a Biracial Sample. *Journal of Consulting and Clinical Psychology*, 65, 653-662. doi:10.1037/0022-006X.65.4.653

Research shows that youth who are exposed to more tobacco advertisements or live in areas with high retailer density are more likely to experiment and have favorable attitudes towards tobacco<sup>54,55</sup>. Below are two maps indicating the locations of tobacco retailers in relation to schools in Klamath County.

Klamath Falls - Tobacco retailers and 1,000 foot buffers around public and private schools

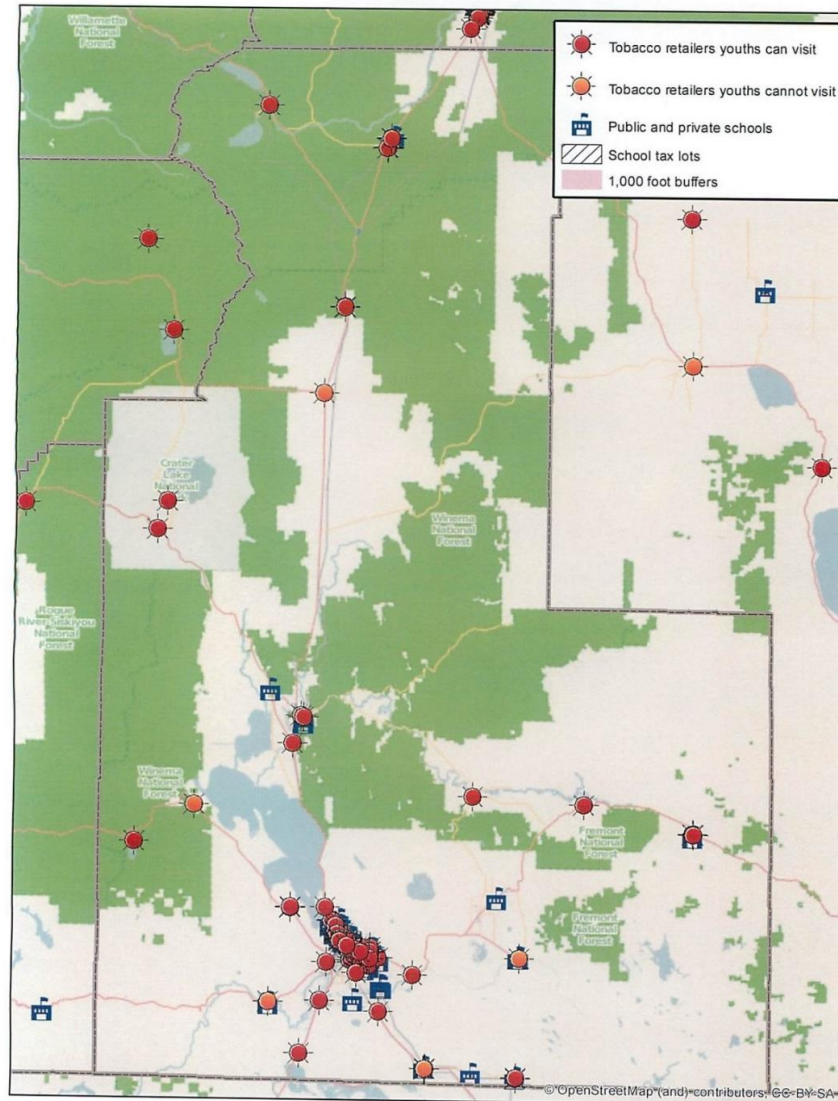


<sup>54</sup> National Center for Chronic Disease Prevention and Health Promotion (US) Office on Smoking and Health. Preventing Tobacco Use Among Youth and Young Adults: A Report of the Surgeon General. Atlanta (GA): Centers for Disease Control and Prevention (US); 2012. Social, Environmental, Cognitive, and Genetic Influences on the Use of Tobacco Among Youth.

<sup>55</sup> Tobacco Legal Consortium. 2014. Point of Sale Strategies: A Tobacco Control Guide.



### Klamath County - Tobacco retailers and 1,000 foot buffers around public and private schools



Density of tobacco retailers and proximity of retailers to schools impacts youth tobacco rates in two primary ways. First, having a lot of tobacco retailers nearby makes it relatively easy for youth to get to places where they or their older friends or family can purchase tobacco products. One study found the prevalence of smoking was higher at high schools with five or more retailers within the area.<sup>56</sup> According to another study, increased tobacco retailer density was associated with experimental smoking.<sup>57</sup>

<sup>56</sup> Henriksen, L., Feighery, E. C., Schleicher, N. C., Cowling, D. W., Kline, R. S., & Fortmann, S. P. (2008). Is adolescent smoking related to the density and proximity of tobacco outlets and retail cigarette advertising near schools? *Preventive Medicine, 47*, 210-214.

<sup>57</sup> 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. *American Journal of Public Health, 99*, 2006-2013. doi: 10.2105/AJPH.2008.145128

Second, living or going to school close to tobacco retailers increases the likelihood that youth will go into those stores for other reasons and be exposed to the tobacco product advertising in the store. A scholarly publication shows that high risk youth populations living in areas with high tobacco retailer density, are more likely to have positive attitudes towards tobacco marketing, which includes the desire for tobacco initiation.<sup>58</sup>

Nearly 60% of tobacco retailers in Klamath County are convenience stores, and according to one study, 70% of adolescents shop in convenience stores weekly—thus being exposed to tobacco on a regular basis.<sup>59</sup> According to another study, 66% of all 6th-8th grade students visit a small tobacco retailer at least 2 times weekly, which is related to an increased 50% in odds of smoking, based on exposure to tobacco products and advertising.<sup>60</sup> Not only are youth more susceptible than adults to advertising, but tobacco companies often design in-store advertising in ways that attract kids' attention and appeal to their preferences. According to The American Legacy Foundation, 29% of youth ages 12-14, 37% of youth ages 15-17, and 40% of young adults ages 18-24 had seen tobacco advertisements in the last 30 days.<sup>61</sup> Seven studies identified associations between tobacco ads at registers and increased initiation of smoking; two studies, related to children, found links between tobacco ads at registers and the children beliefs of ease of attaining tobacco products.<sup>62</sup> Another study examining the retail environment around high schools with high smoking rates (above 20.5%) found that half of retail stores near such schools displayed advertising near registers. In addition, stores near these schools reported having lowest tobacco prices, more advertising and fewer government smoking warnings than stores near other schools with lower smoking rates.<sup>63</sup> Other studies have also shown that stores closer to schools have more exterior tobacco advertisements compared to stores further from schools.<sup>64</sup>

Currently in Klamath Falls: There are approximately 43 tobacco retailers, nearly half of which are located within 1,000 feet of schools. In Klamath County there are 1.1 retailers per 1000 people, compared to 0.8 statewide.

<sup>58</sup> Patricia A. Cavazos-Rehg, Melissa J. Krauss, Edward L. Spitznagel, Richard A. Grucza, and Laura Jean Bierut "The Hazards of New Media: Youth's Exposure to Tobacco Ads/Promotions." *Nicotine Tob Res.* first published online October 25, 2013 doi:10.1093/ntr/ntt168

<sup>59</sup> Chanil D. Profile of the convenience store customer, February 12, 2001; <http://www.allbusiness.com/retailtrade/food-stores/4492306-7.html>.

<sup>60</sup> Henriksen, L., Feighery, E. C., Wang, Y., & Fortmann, S. P. (2004). Association of Retail Marketing With Adolescent Smoking. *American Journal of Public Health, 94*, 2081-2083.

<sup>61</sup> Retrieved from <http://legacyforhealth.org/newsroom/press-releases/exposure-to-pro-tobacco-advertising-and-marketing-by-america-s-youth-continues-despite-sweeping-restrictions-implemented-five-years-ago>

<sup>62</sup> Paynter, J., & Edwards, R. (2009). The impact of tobacco promotion at the point of sale: A systematic review. *Nicotine & Tobacco Research, 11*, 25-35. doi: 10.1093/ntr/ntn002

<sup>63</sup> Lovato, C. Y., Hsu, H. H., Sabiston, C., Hadd, V., Bykiforuk, C. J. (2007). Tobacco Point-of-Purchase Marketing in School Neighbourhoods and School Smoking Prevalence: A Descriptive Study. *Canadian Journal of Public Health, 98.4*, 265-270.

<sup>64</sup> Pucci LG, Joseph HM Jr, Siegel M. Outdoor tobacco advertising in six Boston neighborhoods: evaluating youth exposure. *American Journal of Preventive Medicine.* 1998;15(2):155-9; Rogers T, Feighery E, Tencati EM, Butler JL, Weiner L. Community mobilization to reduce point-of-purchase advertising of tobacco products. *Health Education Quarterly* 1995;22(4):427-42.





If the proposed ordinance prohibited the establishment of new stores, allowing grandfathered-in current tobacco retailers only, and didn't allow new tobacco retail locations to open in the event of tobacco retail sites that cease operation, then tobacco retail density could only diminish.

## **Recommendations**

*From our literature reviews of case studies, research studies, youth focus groups, and key informant interviews with tobacco retailers, the project team understands the potential impacts of several tobacco control regulations. Although there are a plethora of tobacco control policy interventions to explore, only TRL, density, and school buffers were thoroughly examined due to the limited time and capacity for this project.*

Based on the results from this HIA, the team recommends the following:

1. Adopt Tobacco Retail Licensing

*Option 1:* Tobacco Retail License + Density Cap + School Buffer Zone

OR

*Option 2:* Tobacco Retail License + Density Cap

2. Conduct another Health Impact Assessment specifically on the impact of flavored tobacco product bans and youth usage.

### **Definitions:**

*Tobacco Retail License:* All retailers selling tobacco products will be required to apply for a Tobacco Retail License (TRL). There shall be a license fee that is high enough to sustain the licensing infrastructure without making a profit. The fee would need to sustain personnel costs for license administration and enforcement, as well as retailer and youth education. All four of the local retailers interviewed said they are diligent about carding and they feel the best use of tobacco prevention funds is best spent on youth education. Klamath County Public Health will be in charge of enforcement and will conduct periodic enforcement checks (in coordination with the FDA and Synar). The business itself, not the employee, will be responsible for non-compliance penalties, which may include fines, license suspension, and/or license revocation.

*Density Cap:* There shall be a cap on tobacco retailers in Klamath County. All current tobacco retailers will be grandfathered in. Licenses are non-transferrable. Once the number of current tobacco retail licenses drops below the cap, other interested businesses may apply for a Tobacco Retail License, though the number of retailers shall not exceed the cap.

*School Buffer Zone:* No Tobacco Retail Licenses will be given to businesses within 1000 feet of schools nor childcare facilities. All current tobacco retailers will be grandfathered in.

**Justification:**

*TRL:* While there is limited evidence that Tobacco Retail Licensing alone is an effective method to reduce youth tobacco use, TRL's can be an effective framework for comprehensive tobacco control. TRL is the foundation necessary for implementation of the density cap and/or school buffer, making it the core of our recommendations. Many state and local governments have TRL policies in place; Oregon is one of only nine states in the United States that do not have statewide TRL policies.<sup>65</sup> Furthermore, TRL's can help support retailer compliance to youth tobacco sales laws. According to Synar data, the average minor sales compliance rate in Klamath County was 61% from 2009-2014.<sup>66</sup> During the 2013-2014 inspection season, youth decoys were able to successfully purchase tobacco 22% of the time and 32% of the time during the 2012-2013 inspection period.<sup>67</sup> While youth in Klamath County get tobacco products from social sources, they also report purchasing directly from retailers and have knowledge of particular retailers who have lax identification verification practices.<sup>68</sup> Despite the fact that TRL alone is not shown to be an effective tool in decreasing tobacco use, given Klamath County's low Synar compliance rates, additional enforcement and oversight may improve our compliance rates and create an additional barrier to youth tobacco access.

*Density Cap:* Studies have shown that density affects youth tobacco use rates. Cantrell et al. (2015) found that increased tobacco retailer density was significantly associated with a higher likelihood of young adult smoking initiation.<sup>69</sup> Density of tobacco outlets in proximity to schools is a risk factor for youth smoking. Another study found that prevalence of smoking was 3.2% higher among students in schools with the highest density of surrounding tobacco retailers compared with students in schools without any tobacco retail outlets.<sup>70</sup> McCarthy et al. (2009) found that high retailer density was associated with higher experimental smoking rates among high school youth.<sup>71</sup> Although the research team did not find studies specifically on density caps, considering the significant influence proximity to tobacco retailers has on

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<sup>65</sup> Center for Disease Control and Prevention, Office on Smoking and Health. 2015. Accessed at <http://apps.nccd.cdc.gov/statesystem/ComparisonReport/ComparisonReports.aspx?TopicID=604&MeasureID=645&MeasureSeq=1>

<sup>66</sup> Oregon Tobacco Retailer Inspections Synar Program 1994-2014. 2015

<sup>67</sup> Oregon Tobacco Retailer Inspections Synar Program 1994-2014. 2015

<sup>68</sup> Klamath County Youth Health and Tobacco Assessment. Oregon Health and Sciences University School of Nursing, Klamath Falls Campus. 2015

<sup>69</sup> Cantrell, Jennifer, et al. "Tobacco Retail Outlet Density and Young Adult Tobacco Initiation." *Nicotine & Tobacco Research*. 2015

<sup>70</sup> Henriksen, L., Feighery, E. C., Schleicher, N. C., Cowling, D. W., Kline, R. S., & Fortmann, S. P. (2008). Is adolescent smoking related to the density and proximity of tobacco outlets and retail cigarette advertising near schools? *Preventative Medicine*, 47, 210-214

<sup>71</sup> McCarthy, William J., et al. "Density of tobacco retailers near schools: effects on tobacco use among students." *American Journal of Public Health* 2009; 99(11).



youth, it can be concluded that low density of tobacco retailers could be a protective factor, thus it is recommended to put a cap on retailer density in Klamath.

*School Buffer Zone:* While school buffers are not consistently shown to decrease youth smoking rates in the available literature, this is a standard addition to many local tobacco retail license ordinances. For example, Lane County prohibits tobacco retailer locations within 1000 feet of schools, childcare facilities, and other establishments that serve children.<sup>72</sup> Additionally, school buffer zones for tobacco would maintain consistency with other legal adult-use substance regulations (such as marijuana and alcohol). In Klamath County, retailers within 1000 feet of schools, childcare facilities, churches, and alcohol treatment centers are prohibited from selling alcohol and recreational or medical marijuana.<sup>73</sup> Furthermore, prohibiting tobacco retailers near places youth visit reduces tobacco retailer density<sup>74</sup> and limits the availability of and exposure to tobacco products. This could help reduce youth smoking rates, begin changing social norms, and improve the health perspective of the retail landscape.<sup>75</sup>

In conclusion, the combination of a Tobacco Retail License, Density Cap, and School Buffer Zone is the strongest policy option because, as shown through research, it has the potential to impact several levels from education to environment to enforcement. The combination of a Tobacco Retail License and Density Cap is the second strongest option, as it has less provisions. The School Buffer Zone was removed from the second option as it is the weakest of the proposed additional provisions associated with the TRL.

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<sup>72</sup> Lane Code Chapter 9: Ordinance Number 14-19. Lane County. December 2014

<sup>73</sup> Oregon Liquor Control Commission. Klamath County Office. 2015

<sup>74</sup> Luke DA, Stamatakis KA, Brownson RC. State youth-access tobacco control policies and youth smoking behavior in the United States American Journal of Preventive Medicine. 2000;19(3):180; McLaughlin I. License to Kill?: Tobacco Retailer Licensing as an Effective Enforcement Tool. St. Paul, MN: Tobacco Control Legal Consortium; April 2010.

<sup>75</sup> McCarthy, William J., et al. "Density of tobacco retailers near schools: effects on tobacco use among students." American Journal of Public Health 2009; 99(11).



## Appendix A: Initial List of Possible Connections between Tobacco Retail Licensing and Health

Decision	Direct Impacts	Health Determinants	Health Outcomes
Tobacco Licensing and Registration	<ul style="list-style-type: none"> <li>• Reduced number of minors purchasing tobacco from retailers and overall exposure to tobacco advertising and retail environment.</li> <li>• Increase in expenses for tobacco retailers, potentially causing them stop selling tobacco thus reducing the density of retailers.</li> <li>• Increase in amount of SYNAR assessments or similar enforcement.</li> </ul>	<ul style="list-style-type: none"> <li>• By reducing the exposure of tobacco to young children and minors, tobacco initiation and overall use from children will decrease.</li> <li>• If tobacco retailer density is reduced than it reduces access to tobacco and children being exposed to advertising and tobacco products.</li> <li>• Increase in business expenses and strict retailer assessments can provide a strong incentive for tobacco retailers to not sell to minors and adhere to policies.</li> <li>• Un-affordability of tobacco may encourage price sensitive users to quit. There is also concern that increased tobacco prices can put an even higher economic strain on low income individuals that use tobacco who will not decide to quit (but this may be tobacco industry messaging tactics).</li> </ul>	<ul style="list-style-type: none"> <li>• The reduction in tobacco retailer density and overall exposure children will have of tobacco will lead to lower initiation rates and therefore better health outcomes such as reduced risks of developing chronic conditions associated with long term tobacco use such as: lung cancer, COPD, asthma, and gum disease.</li> <li>• The un-affordability of potentially higher tobacco prices can encourage user to quit, leading to healthier outcomes and reduced risks of developing diseases stated above. However, the increased price can add to existing health disparities among low income users, as even more of their income would be spent on tobacco (again, this has been said to be tobacco messaging, so we need to explore this)</li> </ul>



## Appendix B: Tobacco Retailer Interview Questions and Protocol

### KCPH Tobacco HIA - Tobacco Retailer Conversation:

- Start out by introducing who you are and what the project is,
  - To research how our community would be impacted by new laws about tobacco sales, and this research would help inform (city council?) in their decision to support such proposed laws.
- I would suggest using informal (but professional) speech and do NOT read from a script.
  1. So, recently new policies have been enacted in many cities in Oregon, but not yet here in Klamath Falls. What are your thoughts? How do you think KF would react to needing to have a license to sell tobacco just like you have a license to sell alcohol?
    - a. Clarification if answer is nonspecific.
    - b. Do you think it's possible for teens to buy cigarettes?
    - c. Do you think if you had to get a license to sell cigs that people would be more likely to always card people?
    - d. Is your boss big into carding or would your co workers get in trouble if they did?
  2. Do most people that come in for cigs buy other stuff? Is tobacco a big part of your business or just another item sold? How much of your overall business comes from tobacco sales?
    - a. Big part or sell because people buy cigarettes here and there?
  3. Do you know whether or not tobacco companies offer any incentives for selling their products? Some stores get kickbacks to put up posters and what not..is that something you can seek out or do they come to you?
  4. Is there an age range of your most frequent cigarette customers?
  5. Do you think that if there were stricter tobacco laws about selling to kids that it would actually impact the health of local youth?
  6. If there were a fine, do you think employees would change their behavior?
  7. In your experience, do tobacco retailer compliance inspections occur?
    - a. If so, about how often?
    - b. Who does the inspections?
  8. If a policy were put into place, how would business be affected?
    - a. POTENTIAL EXAMPLES: Tax breaks for not selling tobacco or sticker to display that shows store involvement in actively avoiding selling tobacco to minors.
  9. We have heard that a lot of business owners have said that they don't really want to sell tobacco but feel like it's expected for a store like this, why do you think they might feel this way?