

References Supporting Regulation of Smoking and Vaping in the City of Goodyear, Arizona

September 2019

1. NEGATIVE HEALTH EFFECTS (Yale University Medical School Web-site):

- A. Your Teen Is Underestimating the Health Risks of Vaping-
<https://www.yalemedicine.org/stories/teen-vaping> by Kathleen Raven; December 19, 2018.
 - Surgeon General Jerome Adams issued an advisory stating: “I am officially declaring e-cigarette use [vaping] among youth an epidemic in the United States.”
 - “the brain doesn’t stop growing until around age 25. “Studies have shown us that nicotine can interfere with memory and attention processing.”
- B. Nicotine Addiction From Vaping Is a Bigger Problem Than Teens Realize
<https://www.yalemedicine.org/stories/vaping-nicotine-addiction/> by Kathleen Raven; March 9, 2019
 - “Nicotine can spell trouble at any life stage, but it is particularly dangerous before the brain is fully developed, which happens around age 25.”
 - “the aerosol from a vape device has not been proven safe. Studies have found that it contains lead and volatile organic compounds, some of which are linked to cancer.”

2. A GUIDE TO ARIZONA VAPING LAWS

<https://azbigmedia.com/a-guide-to-arizona-vaping-laws/> AZ BIG MEDIA; May 18 (2019)

- There was a 78% increase in the use of e-cigarettes among high-school youth between 2017 and 2018. This is an alarming rate, owing to the fact that there’re laws revolving around AZ public vaping. The current laws forbid the sale of vape to students but aren’t adequate to curb the growing crisis.
- The vaping crisis among the youth has raised concern in many quarters in society. The Lung Association of Arizona has called upon official to increase the minimum age to 21. They believe that doing so will go a long way in reducing the loss of lives.
- They also risk becoming addicted to this deadly product. This is why the U.S. Surgeon General declared the use of e-cigarette as an epidemic in 2018.

3. RISK OF BLAST INJURY:

<https://pdfs.semanticscholar.org/dcd7/907cb9f7ccca66e963f4f5d0eb33099e5a87.pdf>
www.annalsplasticsurgery.com p. 621

- Vaporizing devices have become a popular alternative to conventional nicotine products; however, the batteries can be unstable and explode.

4. **THE CITY OF PRESCOTT, AZ** determined in Ordinance 2018-1616 “that smoking or other use of tobacco or any plant is a positive danger to the health and a material annoyance, inconvenience, discomfort and a health hazard to those who are present....”
5. **THE CITY OF PRESCOTT, AZ** stated in Ordinance 2018-1616:

WHEREAS, the Maricopa County Department of Public Health, in conjunction with the Arizona State University Southwest Interdisciplinary Research Center conducted a study in 2014, which made the following findings:

- Secondhand smoke concentrations in outdoor areas can reach similar levels as those found indoors.
 - Tobacco litter makes up more than one-third of all visible litter and 25-50% of all litter collected from streets and roadways, and can cost cities between \$0.5 million and \$6.5 million dollars.
 - More than 9 in 10 Arizonans agree that secondhand smoke is harmful.
 - More than 8 in 10 Arizonans feel that smoking should be restricted in public parks, but only 18 percent feel that it should be banned completely.
 - Successfully passing a smoke-free parks policy through the Arizona legislature would be exceedingly difficult.
 - Support for smoke-free parks policies might increase if e-cigarettes were included in the ban.
 - There is broad public support for smoke-free parks policies.
6. **THE CITY OF TEMPE, AZ** has determined that smoking and use of electronic smoking devices is injurious to public health:

ARTICLE II. - SMOKING POLLUTION CONTROL
DIVISION 1. - REGULATION OF SMOKING

Sec. 22-40. - Purpose.

The smoking of tobacco or any plant is a positive danger to the health and a material annoyance, inconvenience, discomfort and health hazard to those who are present in confined spaces. Electronic smoking devices, which first entered the United States market in 2007, are electronic inhalers meant to simulate cigarette smoking. Electronic smoking devices use a heating element that vaporizes a liquid solution. Many electronic smoking devices release nicotine, a highly addictive substance, while some merely release flavored vapor. They are designed to mimic traditional smoking implements in their use and appearance. Although the long-term effects of electronic smoking devices may require further study, the United States Food and Drug Administration has found that some devices contain toxins and carcinogens and has expressed concerns about their safety. Use of electronic smoking devices, particularly in places where smoking is prohibited, may interfere with smokers' attempts to quit by making it easier for them to maintain their nicotine addiction. Children and youth who experiment with electronic smoking devices may become addicted to nicotine and ultimately switch to smoking cigarettes. Therefore, in order to serve the public health, safety and welfare, the

declared purpose of this article is to restrict smoking within enclosed places, in particular, public places and places of employment. (Ord. No. 86.06, 1-30-86; Ord. No. O2014.33, 7-31-14)

7. QUICK FACTS ON THE RISKS OF E-CIGARETTES FOR KIDS, TEENS, AND YOUNG ADULTS

https://www.cdc.gov/tobacco/basic_information/e-cigarettes/Quick-Facts-on-the-Risks-of-E-cigarettes-for-Kids-Teens-and-Young-Adults.html –downloaded 8/8/19

- a. The use of e-cigarettes is unsafe for kids, teens, and young adults.
- b. Most e-cigarettes contain nicotine. Nicotine is highly addictive and can harm adolescent brain development, which continues into the early to mid-20s.¹
- c. E-cigarettes can contain other harmful substances besides nicotine.
- d. Young people who use e-cigarettes may be more likely to smoke cigarettes in the future.

8. SMOKELESS TOBACCO HEALTH EFFECTS

https://www.cdc.gov/tobacco/data_statistics/fact_sheets/smokeless/health_effects/index.htm (downloaded 8/8/19)

Smokeless tobacco is associated with many health problems. Using smokeless tobacco:

- Can lead to nicotine addiction^{1,2}
- Causes cancer of the mouth, esophagus (the passage that connects the throat to the stomach), and pancreas (a gland that helps with digestion and maintaining proper blood sugar levels)^{1,2}
- Is associated with diseases of the mouth^{1,3}
- Can increase risks for early delivery and stillbirth when used during pregnancy²
- Can cause nicotine poisoning in children⁴
- May increase the risk for death from heart disease and stroke^{1,3}

9. YOUR TEEN IS UNDERESTIMATING THE HEALTH RISKS OF VAPING

<https://www.yalemedicine.org/stories/teen-vaping/> by Kathleen Raven; DECEMBER 19, 2018 (downloaded on 8/8/19)

- And on one point, Yale health researchers who study the health effects of vaping and e-cigs agree: Vape devices have not been proven to help adult smokers quit smoking. Moreover, vaping increases the risk a teen will smoke regular cigarettes later.
- “The addiction to nicotine and later conversion to (or dual use with) regular cigarettes are the greatest concerns,” says Roy S. Herbst, MD, Yale Medicine’s chief of medical oncology at Yale Cancer Center. He points to two heavyweight organizations, the American Society of Clinical Oncology (ASCO) and the American Association for Cancer Research (AACR), that have issued statements that vaping could be harmful to youth. (Dr. Herbst chairs the AACR Tobacco & Cancer Subcommittee that led the development of the statement.)

10. COMPREHENSIVE SMOKEFREE [AND TOBACCO FREE] PLACES ORDINANCE

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Appendix A: FINDINGS.

WHEREAS, tobacco use causes death and disease and continues to be an urgent public health threat, as evidenced by the following:

- The World Health Organization (WHO) estimates that tobacco kills up to half of its users, amounting to more than 7 million deaths each year worldwide,ⁱ including nearly half a million people who die prematurely from smoking in the United States alone;ⁱⁱ
- Tobacco use causes disease in nearly all organ systems and is responsible for 87 percent of lung cancer deaths, 32 percent of coronary heart disease deaths, and 79 percent of all chronic obstructive pulmonary disease cases in the United States;ⁱⁱⁱ and
- The economic damage attributable to smoking and exposure to secondhand smoke in the United States has climbed to almost \$300 billion annually,^{iv}
- Despite significant progress, tobacco use remains the leading cause of preventable death and disease in the United States,^v and

WHEREAS, tobacco use is the number one cause of preventable death in California^{vi} and continues to be an urgent public health issue, as evidenced by the following:

- 40,000 California adults die from smoking annually;^{vii}
- Smoking costs California \$13.3 billion in direct health care expenses, \$3.6 billion in Medicaid costs caused by smoking, and \$10.4 billion in smoking-caused productivity losses;^{viii}
- More than 25% of all adult cancer deaths in California are attributable to smoking;^{ix}

WHEREAS, significant disparities in tobacco use exist in California, which create barriers to health equity,^x as evidenced by the following:

- African American (20 percent), Asian (15.6 percent), Hispanic (15 percent), and American Indian/Alaska Native (36.2 percent) males all report a higher smoking prevalence than white, non-Hispanic males (14.8 percent);^{xi}
- More than half of low socioeconomic status American Indian/Alaska Native Californians smoke, the highest smoking prevalence among all populations;^{xii}
- Smoking prevalence increased among high school–age African American youth from 2002 to 2012 while rates decreased for high school–age youth overall, and for all other race/ethnicity groups;^{xiii}
- Californians with the highest levels of educational attainment and annual household income have the lowest smoking rates;^{xiv}
- Those who identify as bisexual, compared with heterosexual, gay/lesbian/homosexual, not sexual, celibate, or other, smoke at rates disproportional to their representation in

California;^{xv}

- Those who rent their homes, compared with those who own their homes or have other arrangements, smoke at rates disproportional to their representation in California;^{xvi}
- A 2014 report noted that those who reported they likely experienced psychological distress in the preceding year smoked at rates disproportional to their representation in California;^{xvii} and

WHEREAS, secondhand smoke has been repeatedly identified as a health hazard, as evidenced by the following:

- The U.S. surgeon general concluded that there is no risk-free level of exposure to secondhand smoke;^{xviii}
- The California Air Resources Board categorized secondhand smoke as a toxic air contaminant, along with most toxic automotive and industrial air pollutants, for which there is no safe level of exposure;^{xix,xx}
- The California Environmental Protection Agency (EPA) included secondhand smoke on the Proposition 65 list of chemicals known to the state of California to cause cancer, birth defects, and other reproductive harm;^{xxi} and
- The American Society of Heating, Refrigerating, and Air Conditioning Engineers (ASHRAE) has concluded that “the only means of effectively eliminating health risk associated with indoor exposure [to secondhand smoke, cannabis smoke, and aerosol from electronic smoking devices] is to ban smoking activity.”^{xxii,xxiii}

WHEREAS, exposure to secondhand smoke anywhere has negative health impacts, and exposure to secondhand smoke can occur at significant levels outdoors, as evidenced by the following:

- Levels of secondhand smoke exposure outdoors can reach levels attained indoors depending on direction and amount of wind, number and proximity of smokers, and enclosures like walls or roofs;^{xxiv,xxv,xxvi,xxvii}
- Smoking cigarettes near building entryways can increase air pollution levels by more than two times background levels, with maximum levels reaching the “hazardous” range on the United States EPA’s Air Quality Index;^{xxviii} and
- To be completely free from exposure to secondhand smoke in outdoor places, a person may have to move 20 to 29 feet away from the source of the smoke, about the width of a two-lane road.^{xxix,xxx,xxxi}

WHEREAS, exposure to secondhand smoke causes death and disease, as evidenced by the following:

- Since 1964, approximately 2.5 million nonsmokers have died from health problems caused by exposure to secondhand smoke;^{xxxii}
- Secondhand smoke was responsible for an estimated 34,000 heart disease–related and 7,300 lung cancer–related deaths among adult nonsmokers each year during 2005-2009 in the United States;^{xxxiii}
- Exposure to secondhand smoke increases the risk of coronary heart disease by about 25 percent to 30 percent^{xxxiv} and increases the risk of stroke by 20 percent to 30 percent;^{xxxv}

and

- Secondhand smoke kills more than 400 infants every year;^{xxxvi}

WHEREAS, electronic smoking device aerosol may be considered a health hazard, as evidenced by the following:

- Research has found electronic smoking device aerosol contains at least 10 chemicals known to the State of California to cause cancer, birth defects, or other reproductive harm,^{xxxvii, xxxviii} such as formaldehyde, acetaldehyde, lead, nickel, and toluene;^{xxxix, xl, xli, xlii, xliii, xliv}
- Electronic smoking device aerosol is not harmless water vapor as it contains varying concentrations of particles and chemicals with some studies finding particle sizes and nicotine concentrations similar to, or even exceeding, conventional cigarette smoke;^{xliv}
- Evidence continues to build that exposure to electronic smoking device aerosol, including secondhand exposure, has immediate impacts on the human respiratory and cardiovascular systems, and thus likely poses a risk to human health;^{xlvi, xlvii, xlviii, xlix, l, li, lii, liii, liv, lv}
- Given the increasing prevalence of electronic smoking device use, especially among youth and young adults, widespread nicotine exposure resulting in addiction and other harmful consequences is a serious concern;^{lvi} and
- A number of health authorities, including the U.S. surgeon general, ASHRAE, and State of California's Tobacco Education and Research Oversight Committee (TEROC) all support inclusion of electronic smoking devices in regulations of smoking and other tobacco product use.^{lvii, lviii, lix}

WHEREAS, secondhand cannabis smoke has been identified as a health hazard, as evidenced by the following:

- The California EPA included cannabis smoke on the Proposition 65 list of chemicals known to the state of California to cause cancer;^{lx, lxi}
- Cannabis smoke contains at least 33 known carcinogens;^{lxii}
- In one study, exposure to cannabis smoke in an unventilated setting resulted in detectable levels of cannabinoids in non-smoker participants' blood and urine, and participants experienced minor increases in heart rate and impaired cognitive performance;^{lxiii} and
- A recent systematic review of the literature concluded that secondhand exposure to cannabis smoke leads to cannabinoid metabolites in bodily fluids and individuals experiencing self-reported psychoactive effects.^{lxiv}

WHEREAS, laws restricting the use of tobacco products have recognizable benefits to public health and medical costs, with a review of over 80 peer-reviewed research studies from 2000 to 2011 (search period July 2009 – December 2011) showing that smokefree policies effectively do the following:

- Reduce tobacco use: Tobacco use reduced by 2.7 median percentage points;^{lxv}
- Reduce exposure to secondhand smoke: Indoor air pollution reduced by a median of 88 percent and biomarkers for secondhand smoke reduced by a median of 50 percent;^{lxvi}
- Increase the number of tobacco users who quit: Cessation of tobacco use increased up

to 17.4 percentage points with a median of 3.8 percentage points;^{lxvii}

- Reduce initiation of tobacco use among young people;^{lxviii}
- Reduce tobacco-related illnesses and death: There was a 5.1 percent median decrease in hospitalizations from heart attacks and a 20.1 percent median decrease in hospitalizations from asthma attacks;^{lxix} and
- One study estimated a \$8,803 cost per life year gained while other studies found a range of \$148,000 to \$409,000 in health care costs per 100,000 people averted in one year;^{lxx}

WHEREAS, smokeless tobacco is not a safe alternative to smoking and causes its own share of death and disease, as evidenced by the following:

- Smokeless tobacco can lead to nicotine addiction;^{lxxi}
- Smokeless tobacco use causes oral, esophageal, and pancreatic cancers;^{lxxii}
- Smokeless tobacco is associated with increased risk for heart disease and stroke,^{lxxiii, lxxiv, lxxv} and stillbirth and preterm delivery;^{lxxvi} and

WHEREAS, tobacco waste is a major and persistent source of litter, as evidenced by the following:

- The roughly 6.3 trillion cigarettes smoked globally each year result in 300 billion packs that produce almost 2 million tons of waste paper, cellophane, foil, and glue as well as trillions of butts littered across roadways, sidewalks, parks, and other green spaces;^{lxxvii}
- In one study, 74.1 percent of smokers admitting littering cigarette butts at least once in their life and 55.7 percent admit to littering cigarettes in the last month;^{lxxviii}
- In an observational study of nearly 10,000 individuals, after cigarettes were smoked, 45 percent of cigarettes ended up as litter;^{lxxix}
- Tobacco litter represents nearly 34.4 percent of all litter in outdoor recreation areas such as hiking trails and parks;^{lxxx}
- In 2011, 22.6 percent of all debris collected from beaches and coastal areas are smoking-related products;^{lxxxi} and
- Cigarette butts are often cast onto sidewalks and streets, and frequently end up in storm drains that flow into streams, rivers, bays, lagoons, and ultimately the ocean;^{lxxxii, lxxxiii}

WHEREAS, cigarette butts, smokeless tobacco, and electronic smoking devices pose a health threat of poisoning to young children, as evidenced by the following:

- In 2012, American poison control centers received nearly 8,648 reports of poisoning by the ingestion of cigarettes, cigarette butts, and other tobacco products and 84.5 percent of these poisonings were in children ages 5 and younger;^{lxxxiv}
- From 2012 to 2015, American poison control centers received over 29,000 calls for nicotine and tobacco product exposures among children 5 years old and younger, of which 60.1 percent were cigarettes, 14.2 percent were electronic smoking devices, and 16.4 percent were other tobacco products;^{lxxxv} and
- Children who ingest tobacco products can experience vomiting, nausea, lethargy, and

gagging,^{lxxxvi} with e-liquids potentially posing a greater risk of toxicity or fatality through either ingestion or transdermal absorption;^{lxxxvii}

WHEREAS, exemptions and loopholes in California's smokefree workplace laws^{lxxxviii} disproportionately impact low-income communities and communities of color as well as those who work predominantly outdoors as evidenced by the following:

- California Labor Code does not prohibit smoking in up to 20 percent of hotel rooms, cabs of trucks, long-term care facilities, outdoor places of employment, tobacco shops, and private smokers' lounges, which disproportionately employ individuals of low-income and individuals of color;^{lxxxix}
- Hispanic/Latino workers are the most likely to report being exposed to secondhand smoke at work in California (19.5 percent), followed by non-Hispanic other (13.7 percent), Asian/Pacific Islanders (10.5 percent), African Americans (10.4 percent), and Caucasians (9.7 percent);^{xc} and
- Among employed Bay Area young adults, 32.6 percent reported workplace exposure to secondhand smoke with most (31.2 percent) reporting outdoor exposure and lower-skilled and trade occupations demonstrating the four highest significant associations (construction and extraction, transportation and material moving occupations, building and grounds cleaning and maintenance, and food preparation and serving related);^{xc}

WHEREAS, California cities and counties have the legal authority to adopt local laws that prohibit all tobacco use indoors and outdoors in areas not already covered by state law;^{xcii} and

WHEREAS, state law prohibits smoking within 25 feet of playgrounds and tot lots as well as within 20 feet of public (state, county, city, or community college district) buildings, among other locations, and expressly authorizes local communities to enact additional restrictions;^{xciii,xciv,xcv} and

WHEREAS, there is broad public recognition of the dangers of secondhand smoke and support for smokefree air laws, as evidenced by the following:

- A 2008 survey of California voters found that 97 percent thought that secondhand smoke is harmful, 88 percent thought secondhand smoke was harmful even outdoors, 65 percent were bothered by secondhand smoke, and 73 percent support laws restricting smoking in outdoor public places;^{xcvi} and
- In a 2015 survey of California voters, 70 percent supported prohibiting electronic smoking device use where smoking is prohibited;^{xcvii}

WHEREAS, as of March 2018, there are at least 104 California cities and counties with comprehensive outdoor secondhand smoke ordinances;^{xcviii} and

WHEREAS, as of July 1, 2018, at least 120 local jurisdictions in California prohibit the use of electronic smoking devices in specific locations;^{xcix} and

WHEREAS, as of January 2015, there are at least 382 California cities and counties with local laws restricting smoking in recreational areas,^c 101 with local laws restricting smoking in all outdoor dining places,^{ci} and 126 with local laws restricting smoking within 20 feet (or more) of entryways;^{cii} and

WHEREAS, there is no Constitutional right to smoke;^{ciii}

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