The Burden of Tobacco Use in Nevada: Understanding Electronic Cigarettes and Other Emerging Tobacco Products

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TV AD "I smoke when I'm Coloring"



Topics to be Covered

- The toll of tobacco in the U.S.
- Emerging tobacco products
 - ❖ Cigars, Little Cigars, Cigarillos
 - ❖ Snus
 - Dissolvable Tobacco Products (Orbs, Strips, Sticks, Lozenges)
 - Chewing Tobacco, Snuff
 - Hookah
 - **!** Electronic Cigarettes/ E-cigarettes
- How you can help
- Brief Tobacco Use Intervention
- Local resources

Current Climate

- Adult smoking prevalence in Clark County has decreased to 17.1%.
- **Some** diverse community smoking rates have declined.
- High school cigarette smoking prevalence in Clark Co. has declined from 30.7% (1999) to 5.9%.
- 90% of Clark County adults (2008) surveyed believe people should be protected from secondhand smoke.
- State law passed in 2006 to offer more protection from exposure to secondhand smoke (Nevada Clean Indoor Air Act NCIAA).

The Toll of Tobacco

- Smoking is the leading cause of preventable death and kills 480,000
 people each year in the U.S. than alcohol, AIDS, motor vehicle crashes,
 illegal drugs, murders, and suicides <u>combined.</u>*
- Tobacco use kills 1,200 people every day in the U.S.**
- Secondhand smoke is the third leading cause of preventable death in the U.S., killing an estimated 53,000 nonsmokers each year.**

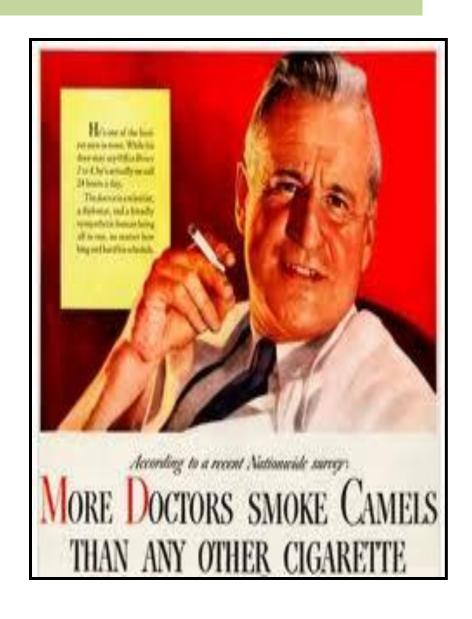
^{*}Campaign for Tobacco-free Kids

^{**}U.S. Centers for Disease Control and Prevention

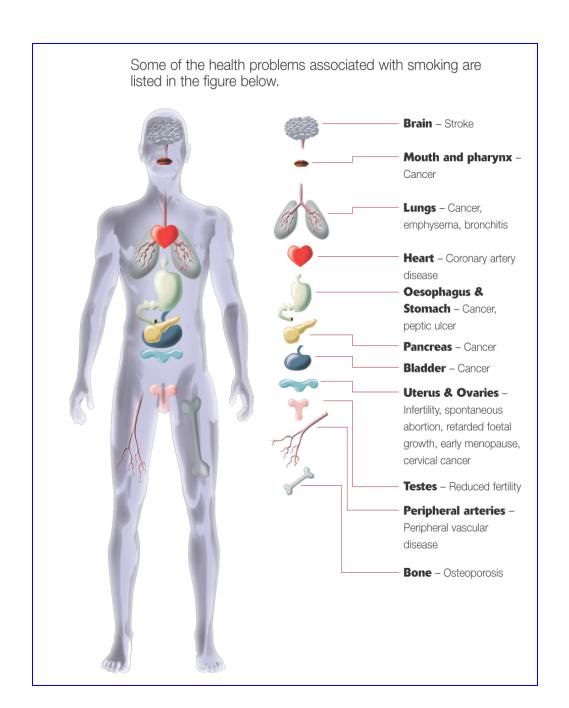
The Toll of Tobacco in Nevada

- The tobacco industry spends over \$78.7 million each year to market their products in Nevada.
- In Nevada, the combined monetary toll of tobacco use per each smoker's lifetime is calculated at \$1,413,733.
- In Nevada, \$1.08 billion is spent in annual health care costs directly caused by smoking.

^{*}Campaign for Tobacco Free Kids as of 2/6/15 https://wallethub.com/edu/the-financial-cost-of-smoking-by-state/9520/ lifetime cost



Smoking damages ALL OF THE BODY: healthcare providers know this, the general public is not completely aware.

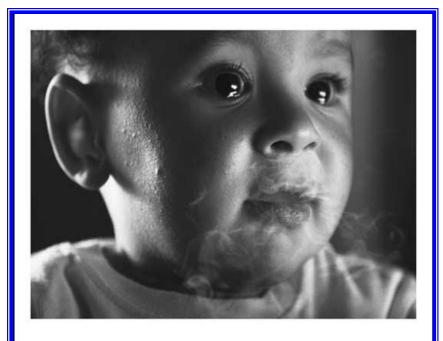


Secondhand Smoke

Contains over 4,000 chemicals, 60 of which are known to cause cancer.

| Nicotine | One of the most addictive substances known to man | As addictive as heroine |
|------------------|---|---|
| Arsenic | Rat poison | Insecticide and weed killer |
| Benzene | Formed from coal and petroleum- Known carcinogen | Used as a solvent in fuel Associated with Leukemia |
| Formaldehyde | Highly poisonous liquid used to preserve bodies | Also found in cigarette smoke |
| Hydrogen Cyanide | Gas chamber poison | Metal cleaner and insecticide |
| Carbon Monoxide | Car exhaust fumes. Forms when cigarette is lit. | Rapidly fatal in large amounts |
| Ammonia | Found in dry cleaning fluids | Toilet cleaner |

Secondhand Smoke and Children



If you smoke around children, they smoke too.

Every year, thousands of children have to go to hospital because of breathing other people's cigarette smoke. For more information call 0800 169 0 169 or visit www.givingupsmoking.co.uk

Secondhand Smoke and Children

- Children are more at risk for the toxic effects of secondhand smoke because their lungs and immune system are less developed.
- They breathe in more air relative to body weight (and for the same exposure, will absorb more tobacco toxins).
- Their exposure is involuntary.
- Most children of smokers are exposed in the home or car.
- Exposure rates increase in children who live in poverty and households with low educational levels.

Effects of Secondhand Smoke on Child Health

- Early Childhood Harm
 - Association between tobacco use during infancy and early childhood and...
 - increased ear infections;
 - new and more severe cases of asthma;
 - bronchitis and pneumonia; and
 - wheezing and lower respiratory illness.



Health Impact of Secondhand Smoke Exposure

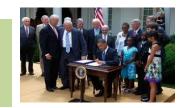
- There is no risk free level of exposure to secondhand smoke
- Secondhand smoke causes heart disease
 - Breathing SHS has immediate adverse effects on your blood and blood vessels;
 - Nonsmokers who are exposed at home or at work increase their risk of developing heart disease by 25–30%;
 - People who already have heart disease are at especially high risk of suffering adverse effects from breathing secondhand smoke and should take special precautions to avoid even brief exposures.
- Secondhand smoke causes lung cancer
 - SHS causes lung cancer in adults who themselves have never smoked;
 - Nonsmokers who are exposed at home or at work increase their risk of developing lung cancer by 20–30%; and
 - Even brief secondhand smoke exposure can damage cells in ways that set the cancer process in motion.

Thirdhand Smoke Exposure

- May remain inside even when smoking took place earlier
- Residue includes heavy metals, carcinogens and even radioactive materials that young children can get on their hands and ingest, especially if they're crawling or playing on the floor.
- Substances in thirdhand smoke include
 - hydrogen cyanide, used in chemical weapons;
 - butane, used in lighter fluid;
 - toluene, found in paint thinners;
 - arsenic;
 - lead;
 - carbon monoxide; and even
 - polonium-210,
- Eleven of the substances are highly cancer-causing.

http://www.nytimes.com/2009/01/03/health/research/03smoke.html

Family Smoking Prevention and Tobacco Control Act: Gives the Food and Drug Administration (FDA) the authority to regulate the manufacture, distribution, and marketing of tobacco products to protect public health.



Restricts **tobacco product** advertising and marketing to youth by directing FDA to issue regulations which, among other things:

- Require proof of age to purchase these tobacco products the federal minimum age to purchase is 18.
- Bans cigarettes with characterizing flavors (except menthol and tobacco).
- Require face-to-face sales, with certain exemptions for vending machines and self-service displays in adult-only facilities.
- Ban the sale of packages of fewer than 20 cigarettes.
- Limit color and design of packaging and advertisements, including audio-visual advertisements (However, implementation of this provision is uncertain due to pending litigation. See Discount Tobacco City & Lottery v. USA, formerly Commonwealth Brands v. FDA.).
- Ban tobacco product sponsorship of sporting or entertainment events under the brand name of cigarettes or smokeless tobacco.
- Ban free samples of cigarettes and brand-name non-tobacco promotional items.
- Prohibits "reduced harm" claims including "light," "low," or "mild," without an FDA order to allow.
- Requires industry to submit marketing research documents.

Other Tobacco Products

- Cigars, Little Cigars, Cigarillos
- **❖** Snus
- Dissolvable Tobacco Products (Orbs, Strips, Sticks, Lozenges)
- Chewing Tobacco, Snuff
- Hookah
- Electronic Cigarettes/ E-cigarettes

Other Tobacco Products (OTP's)/Emerging Tobacco Products

Other Tobacco Products, or OTPs, commonly refer to any tobacco product that is not a cigarette.

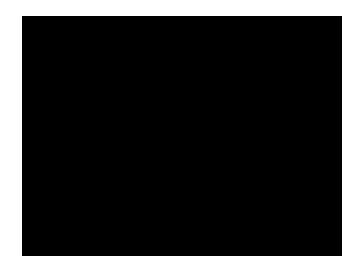








Other Tobacco Products California Ad



Cigars, Little Cigars, Cigarillos



CIGARILLO

- Little cigars or cigarillos resemble cigarettes.
- Little cigars and cigarillos were intended to replace cigarettes as cigarette advertising became increasingly restricted, and taxes on cigarettes, but not cigars, continued to increase, according to tobacco industry documents.
- Come in flavored varieties, including cherry, chocolate, vanilla, peach rum, raspberry, Menthol and sour apple.
- Flavorings may appeal to youth and young people.
- Flavorings in cigars are not regulated by the federal government (FDA).
- Preferred by African American and Hispanic youth.



Not Your Grandfather's Cigar

A New Generation of Cheap and Sweet Cigars
Threatens a New Generation of Kids



Snus





- A moist powder smokeless tobacco product.
- Placed between the cheek and gum.
- Used like smokeless tobacco, but more desirable because it doesn't require the user to spit.
- Also different because it is heated using steam and not fire, which means it contains a lower amount of nitrosamines, a known cancer-causing agent.
- Contains more nicotine than cigarettes.
- Negative health effects are similar to smokeless tobacco use and include developing lesions in the mouth, gum recession and cancer of the mouth or tongue.

Dissolvable Tobacco Products





- Camel Orbs: mint-sized; dissolve in about 10- 15 minutes; contains about 1 milligram of nicotine, almost as much as one cigarette.
- Camel Strips: resemble Listerine breath strips; dissolve in about 2-3 minutes; contains about 0.6 mg of nicotine.
- Camel Sticks: resemble toothpicks; dissolves in about 20-30 minutes; contains about 3.1 mg per stick, similar to the nicotine content in about two cigarettes.

Chewing Tobacco and Snuff

- Snuff is moist, finely chopped tobacco that is placed between the cheek and gum and doesn't require chewing. Some snuff is packaged in individual serving bags, so people can use it without spitting.
- Chewing tobacco, another form of spit tobacco, comes in three types: loose leaf, plugs, and twists.
 Loose leaf is shredded tobacco leaves made into strips; plugs are pressed into small, soft blocks flavored with licorice and sugar and then dried; and twists are dried and twisted into hard spirals.
- In 2013, 3.2% of Nevadan's surveyed reported using smokeless tobacco.







Hookah



- Hookahs are also known as water pipes.
- Commonly used by youth and young adults and believed to be safe.
- Using water as a filter does not change the level of nicotine in the smoke compared to pipes without a water filtration process.
- Lounges popping up near schools and universities.
- Hookah smoke contains 36 times more tar than cigarette smoke.
- Smoking hookah fills your body with 8 times more Carbon Monoxide.

Hookah Continued







- During an average hookah session you take 5 times the number of puffs.
- Each hookah session equals 100 more times the smoke volume compared to a single cigarette.
- A typical hookah session involves more frequent puffs, deeper inhalation, over a longer period of time than cigarettes.
- CDC estimates 1.6 million young people used hookahs in 2014, the large pipes used to smoke flavored tobacco. The agency said those numbers have tripled since 2011.

Hookah Steam Stones



- •A new product, called steam stones is being introduced as a tobacco alternative for use in hookahs.
- •These heat-treated porous materials are soaked in fluid—usually glycerin— and heated in hookahs, where the tobacco would normally be placed, to create a smoke-like vapor.
- Steam stones are marketed as a replacement of the tobacco leaf medium with a 100% natural, extremely pure, raw mineral with no solids and no fine dust are generated but only fine liquid particles as steam, and claim to contain no nicotine.
- •Virtually nothing is known about potential health risks of inhaling vapor from use of steam stones in a hookah.
- •Vendors appear to be aligning their marketing strategies with those of electronic cigarette vendors. One company explicitly markets their steam stones as being based on the same concept as electronic cigarettes.



Electronic Cigarettes Background



- Nicotine delivery device first developed in China in 2004.
- When the user puffs on the inhaler, the battery causes the tip of the ecigarette to glow and the heat created by the battery turns the liquid nicotine into an <u>aerosol</u> of liquid, flavorings and nicotine.
- Include a battery component, a vaporizer, a cartridge filled with liquid nicotine and an inhaler.
- Commonly known as e-cigarette, e-cig, vape pen, or vapor.
- Available in numerous flavors.
- Using an e-cigarette is commonly referred to as vaping.

E-Cigs Refillable and Disposable

- •The e-cigarette can be sold as a metal tube that requires **refillable** containers or tanks of nicotine and flavorings, often called **juice**, and the cartridge can contain up to 20mg of nicotine or more. These devices can be **plugged into a computer to be recharged.**
- •Hundreds of e-juice flavors such as coffee, tobacco, apple, strawberry, banana and bubble gum.
- •Numerous <u>inexpensive</u> e-cigarettes available that are **disposable** and don't require refilling the cartridge. These products can be discarded once the user depletes the liquid nicotine. These products can look like a marker or pen.



E-juice

A traditional single cigarette yields about 1mg of absorbed nicotine. A 15 ml bottle of e- juice can be the equivalent of 4 packs of cigarettes, but this varies since some e-cigarettes can be shut on and off.













E-cigarette Prevalence

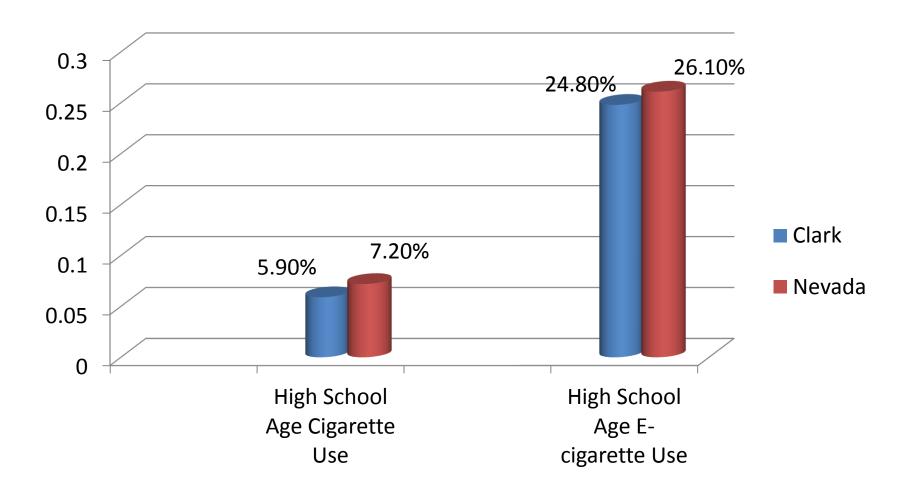
- In 2014, **12.6%** of adults had ever tried an e-cigarette even one time,
- More than **70.0%** of smokers believe that e-cigarettes are less harmful than regular cigarettes.
- The most commonly cited reasons for use by ecigarette users include: the perception that they are healthier/less toxic than traditional cigarettes, aid in tobacco craving/withdrawal symptoms, smoking cessation facilitator, and relapse avoidance.
- In 2014, an estimated 4.6 million youth, including 3.7 million high school and 900,000 middle school students, reported current use (use on one or more days in the past 30 days) of any tobacco product.
- The 2012 NYTS found that **76.3**% of middle and high school students who used e-cigarettes within the past 30 days **also smoked conventional cigarettes.** This raises concerns that e-cigarettes may be an entry point to conventional tobacco products.

11 yr olds Instagram Vape post





Clark County High School Ecigarette Prevalence



NV Youth Risk Behavior Factor Survey, 2015



















E-cigarette Safety and Quality

- 2009 FDA studied 2 brands of e-cig and found:
 - Carcinogens and heavy metals found in juice and aerosol
 - Quality control was inconsistent or non-existent
 - Nicotine free e-cigs contained nicotine
 - Nicotine levels varied, sometimes twice as high as FDA approved devices
 - Not recognized as quit smoking devices
- Nicotine is highly addictive and is a vasoconstrictor meaning it instantly narrows blood vessels:
 - Increases heart rate by 10-20 beats per minute.
 - Considered a neurological-toxin and is used as an insecticide.
- The liquid used in e-cigarettes, when ingested or absorbed through the skin, can cause vomiting, seizures or death.

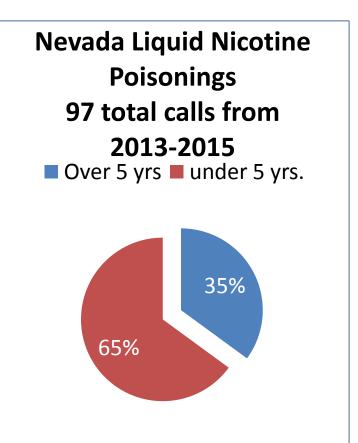
E-cigarette Safety and Quality

- Poison centers reported **2,405** e-cigarette calls from Sept. 2010 to Feb. 2014. The total number of poisoning cases is likely higher than reflected in this study, because not all exposures might have been reported to poison centers.
- Calls to poison centers involving e-cigarette liquids containing nicotine rose from one per month in Sept. 2010 to 215 per month in Feb. 2014.
- According to the CDC, more than half (51.1 percent) of the calls to poison centers due to ecigarettes involved young children 5 years and under, and about 42 percent of the poison calls involved people age 20 and older.

National Poison Control Center

Nevada Poison Center E-juice





Secondhand Aerosol

- John Hopkins Bloomberg School of Public Health researchers demonstrated that ecigarettes lower immunity for flu viruses and Strep bacteria. The study also concluded that free radicals in the vapor are damaging enough that vaping may be harmful even if nicotine isn't in the vapor.
- The aerosol particles emitted from vaping are so tiny they can actually seep through paint on walls the pores in the paint would look like Swiss cheese in comparison to the particle size. The takeaway: E-cigarette emissions whether you yourself are vaping or if you're standing next to someone who is have an immediate effect on your acute lung function. Stanton Glantz, Ph.D., professor of medicine at University of California, San Francisco and director of the UCSF Center for Tobacco Control Research and Education, says the aerosol particles emitted are so tiny they can actually seep through the paint on painted walls.
- The Center for Environmental Health (CEH) says its tests found that nearly 90% of the companies had at least one brand that produced high levels of one or both of the cancer-causing chemicals formaldehyde and acetaldehyde.

Secondhand Aerosol

- E-cigarettes do not just emit "harmless water vapor." Secondhand e-cigarette aerosol (incorrectly called vapor by the industry) contains nicotine, ultrafine particles and low levels of toxins that are known to cause cancer.
- Exposure to fine and ultrafine particles may exacerbate respiratory ailments like asthma, and constrict arteries which could trigger a heart attack.
- At least 10 chemicals identified in e-cigarette aerosol are classified as carcinogens and reproductive toxins. The compounds that have already been identified in mainstream (MS) or secondhand (SS) e-cigarette aerosol include: Acetaldehyde (MS), Benzene (SS), Cadmium (MS), Formaldehyde (MS,SS), Isoprene (SS), Lead (MS), Nickel (MS), Nicotine (MS, SS), N-Nitrosonornicotine (MS, SS), Toluene (MS, SS).
- E-cigarettes contain and emit <u>propylene glycol (PG)</u>, a chemical that is used as a base in e-cigarette solution and is one of the primary components in the aerosol emitted by e-cigarettes.
 - Short term exposure causes eye, throat, and airway irritation.
 - Little known about long-term exposure PG.
 - Material Safety Data Sheet from Dow Chemical states "inhalation exposure to PG mist should be avoided."
- Even though propylene glycol is FDA approved for use in some products, the inhalation of propylene glycol is not. Some studies show that heating propylene glycol changes its chemical composition, producing small amounts of propylene oxide, a known carcinogen.

ASHRAE-American Society for Heating, Refrigeration, and Air Conditioning Engineering Journal, June 2014

- Study concluded e-cigarette aerosol consists of: ...condensed submicron liquid droplets. Which contain many chemicals including some that are carcinogenic, such as formaldehyde, metals (cadmium, lead, nitrosamines).
- We conclude that e-cigarettes emit harmful chemicals into the air and need to be regulated in the same manner as tobacco smoking. There is evidence that nitrosamines, a group of carcinogens found specifically in tobacco, are carried over into the e-cigarette fluid from the nicotine extraction process. There is also evidence that the glycol carriers can by oxidized by the heating elements used in e-cigarettes to vaporize the liquids, creating aldehydes such as formaldehyde. Consumers should be warned that, while the health risks associated with the usage of e-cigarettes are less than those associated with tobacco smoking, there remain substantial health risks associated with the use of e-cigarettes.

Popcorn Lung

- Popcorn lung is a serious lung disease. Medically, popcorn lung is actually known as bronchiolitis obliterans. It is connected to the artificial butter flavoring, diacetyl.
- The main concern for people who use e-cigarettes is the fact that diacetyl is used by some e-liquid vendors as flavoring.
- The main symptoms are a dry cough, wheezing and shortness of breath. Often, air actually gets trapped in the lung because of the obstruction of scar tissue that is formed or inflammation so the lungs are full. The overinflation limits the ability to breathe in fresh, oxygenated air.



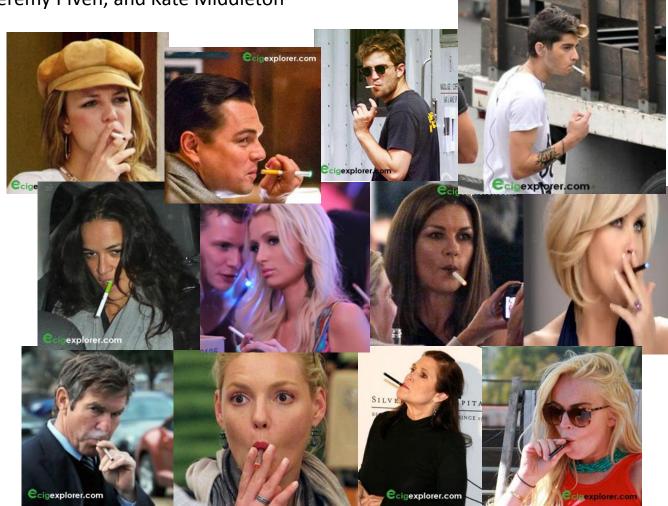
E-cig Industry Using Big Tobacco's Playbook

- Celebrity spokespeople
- Print ads feature rugged men and glamorous women
- Sex sells
- Sponsor sports and music festivals
- Products available in sweet flavors
- Use cartoons
- Their ads say "Switch, Don't quit"

Celebrity Use/Endorsements of E-cigs/Glamorization

 Other celebrities that have been known to smoke electronic cigarettes, but haven't been caught on a camera yet include Mel Gibson, Miley Cyrus, Kate Moss, Ryan Seacrest, Ashley Greene, Nikki Reed, Harrison Ford, Jeremy Piven, and Kate Middleton

Leonardo DiCaprio Robert Pattinson Katherine Heigl Lindsay Lohan Johnny Depp Jenny McCarthy **Dennis Quaid Charlie Sheen Courtney Love Stephen Dorff Brittany Spears Paris Hilton Catherine Zeta Jones** Zayn Malik Michelle Rodriguez **Carrie Fisher Tom Petty**



E-hookah = E-cigarettes





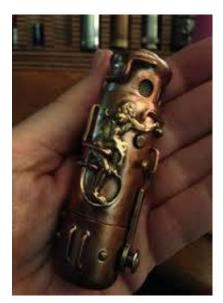


Mods: refers to Modification: Mods can refer to both the actual e-cigarette, also known as a personal vaporizer, or PV. There can also be mods for other parts of e-cigarette hardware, such as an atomizer tank mod.

















E-cigs for Marijuana Smoking

- Orange County, California reporting increasing number of teens filling ecigs with THC (psychoactive substance in marijuana) oil, Hemp oil, hash wax (dabs, honey) which can deliver a more potent high than using marijuana via traditional smoking methods.
- Dabs 70-90% of THC
- Numerous videos on YouTube demonstrating how to use e-cigarettes to smoke marijuana derivatives.
- Some web forum discussions around smoking meth using e-cigs.







E-cigarettes in Nevada

- As of 2015 legislative session some age restriction for purchase not for use.
- NOT covered under Nevada Clean Indoor Air Act.
- NO restrictions on advertising.
- NOT taxed as tobacco products.
- NO tobacco retailer license required to sell e-cigs in Nevada.
- NO local control.
- Sept. 2013: 41 Attorneys General including NV AG Masto asked FDA to regulate. AG's office will work on limiting youth e-cig access in legislative session.
- Numerous NV businesses and organizations have voluntarily implemented restrictions on the use of e-cigs indoors and outdoors.
- Added e-cig use question to Nevada's 2013 BRFSS, YRBS, BABY BEARS survey.
- 2015 YRBS to determine youth and e-cig prevalence.





E-cigarette Public Health Concerns

- Re-normalizes the image of smoking
 - Allowed in places where smoking is not allowed
 - Unrestricted advertising
 - Mimics the smoking behavior
- May increase "dual" use
- May be a gateway to cigarettes and other tobacco products.
- Long term health effects are unknown





- The Nevada Tobacco Quitline offers FREE telephone-based service to Nevada residents 13
 years or older.
- Hours of Operation: Every day 4 am 10 pm (PST).
- Free 8 week supply of Nicotine Replacement Therapy (NRT)- provided to Medicaid and uninsured clients, supply mailed to clients home, counseling and support provided while people are becoming non-tobacco users.
- Free 2 week supply of Nicotine Replacement Therapy (NRT)- provided to privately insured clients, supply mailed to clients home, counseling and support provided while people are becoming non-tobacco users.
- **Fast, Free telephonic** access to trained tobacco cessation experts that can assist with quitting the use of all tobacco products including e-cigarettes.

Advise clients to call from a 702 area code phone:

- 1-800-QUIT-NOW (1-800-784-8669)
- Services available in Spanish and other languages
- 1-855-DEJELO-YA (1-855-335-3569)

Free Materials

Quit cards: Distribute quit cards to each client (double sided Spanish/English)

Posters: Place posters in waiting areas (available English/Spanish)

If you require additional quit cards or posters, please email:

Regional contacts:

<u>azzarelli@snhdmail.org</u> Southern Nevada <u>kseals@washoecounty.us</u> Washoe County <u>Swartgow@carson.org</u> all other areas of Nevada





Get Healthy Clark County .org



VivaSaludable .org



Smoke-free Apartment Directory

Apartment Insight Magazine Ad





SMOKING COSTS MORE THAN JUST THE SMOKER.

Secondhand smoke covers walls and other exposed surfaces with a dirty yellow residue. The estimated cost to clean and refurbish a smoking unit can run \$4,000-\$15,000; while a non-smoking unit is usually less than \$1,000. As a manager or owner of an apartment complex, you can save thousands of dollars in maintenance costs by implementing a smoke-free policy. Other benefits of smoke-free policies include:

- · Attraction and retention of tenants
- · Decreased smoking-related complaints
- · Possible insurance rate decrease
- · Reduced cigarette butt litter
- · Reduced fire danger

If you own, manage or know about other smoke-free apartments in Clark County, call 702-759-1270 or email TobaccoProgram@snhdmail.org. You can also call for FREE signage.

GETHEALTHYCLARKCOUNTY.org





Smoke-free public and private multi-unit housing



Smoke-free/tobacco-free indoor and outdoor environments







Thank You.











Thanks Questions?

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Acknowledgments and Resources

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