

Protecting Nonsmokers from Secondhand Marijuana Smoke

2018

Many states have now legalized marijuana for medical (30 plus DC) and/or recreational use (9 plus DC), with many more considering it. A new industry for marijuana consumption is being created in the U.S. and it has one goal: to normalize marijuana use, including smoking, everywhere and to have it regulated “just like alcohol.” As the trend toward normalizing public smoking of marijuana grows, we need to be aware that more laws will likely be proposed to weaken smokefree protections and allow for broader use of smoking marijuana in public places and even in workplaces. The marijuana industry wants to accomplish this goal, in part, by borrowing tactics from Big Tobacco’s playbook and chipping away at smokefree protections.

Therefore, it is not surprising that the growing marijuana industry is starting to look more like the tobacco industry – a commercial industry seeking to maximize sales, profits, and product consumption, and backed by marketing campaigns, lobbyists, and lawyers to shape regulation. At the same time, tobacco is starting to look a little more like marijuana – seeking to dovetail on any opportunity to renormalize smoking in social environments, like bars, and pushing to allow for indoor use of e-cigarettes and “vape pens” that can be used to consume both tobacco and marijuana products.

As the marijuana industry grows and is legalized, health professionals are trying to keep up with the changes this entails for their communities, such as an increase in marijuana smoking and exposure to secondhand marijuana smoke. Regardless of the debate of possible benefits of marijuana products, there is simply no need to use them inside shared air spaces (such as workplaces, public places, and multi-unit housing) where others are then subject to the hazardous secondhand smoke or secondhand aerosol from electronic smoking devices. Just like traditional cigarettes, marijuana should be used in ways that don’t impact the health of others.

Be prepared!

Nobody should have to breathe secondhand marijuana smoke at work or where they live, learn, shop, or play. **Smoke is smoke and marijuana smoke is a form of indoor air pollution.** Therefore, it is important to strengthen all smokefree laws – both existing and new – to include marijuana in the definitions of smoking and vaping. Since 2010, ANR, our sister organization, provides model smokefree ordinances and policies which include marijuana as a product prohibited in smokefree environments. By including marijuana smoke, it effectively eliminates any potential confusion by clearly defining smoking as “inhaling, exhaling, burning, or carrying any lighted or heated cigar, cigarette, pipe, hookah, or any other lighted or heated tobacco or plant product intended for inhalation, including marijuana, whether natural or synthetic, in any manner or in any form.”

For more information, refer to ANRF’s Secondhand Marijuana Smoke fact sheet:

<https://no-smoke.org/wp-content/uploads/pdf/secondhand-marijuana-smoke.pdf>

Secondhand Marijuana Smoke Contains Hundreds of Chemicals – Just Like Secondhand Tobacco Smoke

Several peer-reviewed and published studies indicate that exposure to secondhand marijuana smoke can have health and safety risks for the general public, especially due to its similar composition to secondhand tobacco smoke.

If marijuana smoking is allowed indoors in public places, both employees and patrons are at risk. Secondhand smoke exposure from marijuana can cause significant health issues including breathing problems.

- Secondhand smoke from combusted marijuana contains fine particulate matter that can be breathed deeply into the lungs,ⁱ which can cause lung irritation; asthma attacks, and makes respiratory infections more likely. Exposure to fine particulate matter can exacerbate health problems especially for people with respiratory conditions like asthma, bronchitis, or COPD.ⁱⁱ
- Significant amounts of mercury, cadmium, nickel, lead, hydrogen cyanide, and chromium, as well as 3 times the amount of ammonia, are found in mainstream marijuana smoke than is in tobacco smoke.ⁱⁱⁱ
- In 2009, the California Office of Environmental Health Hazard Assessment added marijuana smoke to the list of carcinogens and reproductive toxins cited as dangerous in the *Safe Drinking Water and Toxic Enforcement Act of 1986*, also known as Proposition 65. It reported that at least 33 individual constituents present in both marijuana smoke and tobacco smoke are Proposition 65 carcinogens.^{iv, v}
- Secondhand smoke from marijuana has many of the same chemicals as smoke from tobacco, including those linked to lung cancer.^{vi}
- Secondhand marijuana smoke exposure impairs blood vessel function. Published studies on rats show thirty minutes of exposure to secondhand marijuana smoke at levels comparable to those found in restaurants that allow cigarette smoking led to substantial impairment of blood vessel function. Marijuana smoke exposure had a greater and longer-lasting effect on blood vessel function than exposure to secondhand tobacco smoke.^{vii}
- One minute of exposure to marijuana SHS substantially impairs endothelial function in rats for at least 90 minutes, considerably longer than comparable impairment by tobacco SHS. The findings in rats suggest that SHS can exert similar adverse cardiovascular effects regardless of whether it is from tobacco or marijuana.^{viii}
- Secondhand marijuana smoke and secondhand tobacco smoke is similar in many ways. More research is needed, but the current body of science shows that both tobacco and marijuana smoke have similar chemical composition and suggests that they may have harmful cardiovascular health effects, such as atherosclerosis (partially blocked arteries), heart attack, and stroke.^{ix}
- Particle concentrations from dabbing and vaporizing cannabis can create levels of indoor air pollution similar as those seen in extreme air pollution events like wildfires and severe industrial pollution. Exposure at these concentrations can cause cardiovascular and respiratory disease.^x
- People who are exposed to secondhand marijuana smoke can have detectable levels of THC (tetrahydrocannabinol) in their blood and urine.^{xi}
- Marijuana also can be contaminated with mold, insecticides, and other chemicals that may be released in secondhand smoke.^{xii}

Issue and Policy Trends

As the marijuana industry ramps up to become as influential and aggressive as Big Tobacco, there is a need for public health professionals and advocates to get ahead of policy trends for marijuana use in states and communities.

Here are some tips for what to expect from marijuana industry proponents and how to prepare to protect nonsmokers' rights:

1. Be sure smokefree laws specifically address marijuana, as well as electronic smoking devices.

If a state legalizes marijuana use, state and local smokefree laws should define smoking to include the smoking of marijuana as well as the use of electronic smoking devices. If a smokefree law does not prohibit the use of electronic smoking devices in smokefree spaces, this means that marijuana vaping is, by default, allowed in workplaces, bars, restaurants, and other public venues unless prohibited by an individual business policy. If not specifically prohibited, everyone else in the building has to breathe the smoke. Nonsmokers should not have to breathe other people's secondhand marijuana smoke or vaped aerosol in smokefree spaces like workplaces, public places, and apartment buildings. Contact ANR for sample policy language.

2. Social clubs and Semi-enclosed areas

A challenge for marijuana regulation is to identify appropriate places for use of the product. Expect a lot of pressure to enable marijuana use in enclosed areas (social smoking "clubs") and semi-enclosed areas (rooftop bars, alley bars, and patios). The question to ask is: how will allowing marijuana smoking affect other people? Do people work or volunteer there? Will non-users be exposed to secondhand marijuana smoke or thirdhand smoke residue? Will marijuana smoke drift into neighboring businesses or property?

People should not have to breathe smoke of any kind while at work or when in public places.

3. New definitions and terms

Expect marijuana industry proponents to come forward with new loosely defined terms not addressed by current smokefree laws. The industry will also try to redefine old terms like "public" in ways more favorable to their purposes of normalizing marijuana use everywhere.

4. Watch the money

The huge amount of money to be made by this new industry is hard for policy makers, states, communities, and organizations to resist. Yet this money comes with strings attached. Be sure to keep an eye open to this new industry masquerading as partners and "benefactors," all the while expecting policies to be passed to benefit smoking everywhere.

Be sure to refer back to ANR's model language for clearly defined terms and restrictions.

Ventilation Cannot Protect You From the Harmful Effects of Secondhand Smoke. Period.

The tobacco industry tactic of proposing ventilation systems to solve the secondhand smoke problem is being dusted off and promoted by the marijuana industry. Industry lobbyists and proponents say, “Just put a ventilation system into your marijuana club and the secondhand smoke problem is solved.” Nothing could be further from the truth.

As has been proven time and time again, ventilation does not eliminate all the poisonous toxins and chemical components of secondhand smoke. The science is clear. Ventilation systems or air cleaning technologies may reduce odor, but they do not address the serious health risks caused by secondhand smoke exposure. Research is showing that negative health impacts, especially to the cardiovascular system, occur quickly even at extremely low levels of exposure to secondhand marijuana smoke. The only way to eliminate the health hazards of secondhand smoke is by having a 100% smokefree environment.

The Board of Directors for the [American Society of Heating, Refrigerating, and Air Conditioning Engineers \(ASHRAE\)](#), the international standard-setting body for indoor air quality, unanimously adopted an important position statement on secondhand tobacco smoke at its summer 2005 conference.

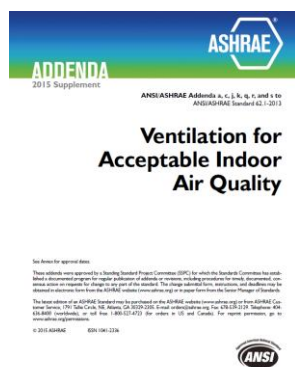
ASHRAE Standard 62.1 reaffirms:

- There is [no safe level of exposure to secondhand smoke](#).
- Ventilation and other air filtration technologies cannot eliminate all the health risks caused by secondhand smoke exposure.
- Tobacco smoke does not belong in indoor areas.

In 2013, the Standard was amended and states:

- Marijuana smoke should not be allowed indoors.
- Emissions from electronic smoking devices should not be allowed indoors

The fact remains that the only way to eliminate the health hazards of secondhand smoke—from tobacco or marijuana smoke or emissions from electronic smoking devices—is with a 100% smokefree environment.



Addendum c to Standard 62.1-2013

Modify Section 3 as follows.

environmental tobacco smoke (ETS): the “aged” and diluted combination of both side-stream smoke (smoke from the lit end of a cigarette or other tobacco product) and exhaled main-stream smoke (smoke that is exhaled by a smoker). ETS is commonly referred to as *secondhand smoke*. This definition includes smoke produced from the combustion of cannabis and controlled substances and the emissions produced by electronic smoking devices.

Opposition Arguments and Activities

Remember: The marijuana industry’s goal is to make marijuana use (including smoking) as “normal” as alcohol use. To achieve this goal, the industry will advance legislation for regulating marijuana just like alcohol and not like tobacco.

CASE STUDY: DENVER

Colorado voters legalized recreational marijuana in 2012. In Denver, the marijuana industry narrowly won a ballot initiative—Measure 300—in November 2016 to allow marijuana use, including smoking or vaping, in consumption sites in “approved neighborhoods” throughout the city. Measure 300 allows for vaping and consuming edibles indoors and allows for smoking outdoors, provided it is out of sight. Marijuana consumption sites need to be 1,000 feet from licensed child care centers, alcohol and drug treatment centers, and establishments that cater to children like city recreation centers.

So far, Colorado’s four-year pilot program for marijuana consumption areas has only had one (soon to be two) businesses be approved for consumption licenses. The measure will sunset in 2020, but due to pressure from the marijuana industry, Denver’s City Council is considering loosening the proximity restrictions to 500 feet from child care centers. Public health professionals and smokefree advocates are working constantly to counter the marijuana industry’s goal of allowing more venues for smoking and vaping marijuana, and to provide factual information about negative health effects from exposure to secondhand marijuana smoke and THC, the main mind-altering ingredient in the cannabis plant and in secondhand smoke and vape.

CASE STUDY: COLORADO

Marijuana industry backed legislation has been introduced each year in Colorado for public marijuana consumption sites statewide. In an alarming trend, several of these bills have proposed allowing local jurisdictions to create exemptions to the definition of “open and public” consumption, including smoking.

Local communities in Colorado have been strengthening, not weakening, their smokefree protections by adding electronic smoking devices and marijuana smoke to their local laws. Marijuana industry backed bills would seek to reverse that trend for the state by increasing the number of places where smoking and vaping may occur.

Colorado’s experience also speaks to the tactic by the marijuana industry to take advantage of loop-holes or exemptions in state smokefree laws. Because Colorado has an exemption in its state smokefree workplace law to allow smoking in small businesses with three or fewer employees and the law does not prohibit the use of electronic smoking devices, the marijuana industry is seeking to pass legislation that would allow marijuana smoking in such workplaces by taking advantage of these exemptions. There is great concern that marijuana consumption businesses will intentionally keep staff count low to allow indoor smoking. Also, indoor vaping of marijuana could soon be actively promoted by the industry.

CASE STUDY: ALASKA

Alaska voters legalized recreational marijuana in 2014, and the Marijuana Control Board has been working to set the regulatory process for marijuana growth, sales, and consumption for the state. During each of the six public comment periods for their regulatory process, the general public has submitted an abundance of comments against allowing marijuana smoking in public. This stalling tactic is frequently used by the tobacco industry to both frustrate and weary public health advocates and to give ample opportunity for the industry to rally their supporters. Another example of a Big Tobacco tactic being taken up by the marijuana industry is to place industry representatives on regulatory boards. When Alaskans voted to legalize recreational marijuana use, they were assured by bill language that marijuana would not be smoked or vaped openly and publicly. It is an industry tactic to then push legislation and regulations for redefining “public” spaces as indoors away from public view in “private” venues such bars, yoga studios, coffee shops, on-site use clubs, etc. This is contrary to the will of the general public and opens up more places for indoor smoking. Due to the dangers of secondhand smoke exposure, the regulatory rule-making process for marijuana smoking should follow tobacco use rules instead of alcohol regulations.

The marijuana industry wants clarity on where marijuana can be used legally, but this can run headlong into smokefree workplace and public place laws. *What about bars and other entertainment venues? What about in a multi-unit apartment building where the smoke affects other residents and guests?*

ANR Foundation’s position is that marijuana smoking should be prohibited in these venues. Regardless of what is being smoked, it should not be smoked in ways that negatively impact other people’s health and well-being. Smoke is smoke. Secondhand marijuana smoke, like tobacco smoke, contains thousands of chemicals, many of which are toxic. The smoke also contains hazardous fine particles (PM 2.5) that pose a significant respiratory health risk to nonsmokers. Similarly, the secondhand aerosol emitted from electronic smoking devices also contains ultrafine particles, toxins, carcinogens, volatile organic compounds, and nicotine, and thus poses a public health risk.

We believe that laws and policies should make it clear that marijuana smoking and “vaping” should not be allowed in workplaces and public places, both indoors and outdoors, that are required by law or voluntary policy to be smokefree.

CASE STUDY: OHIO

Taking a page from Big Tobacco’s playbook, “Buddie the Marijuana Mascot” promotes marijuana use in Ohio. Is this the new Joe Camel targeting kids?

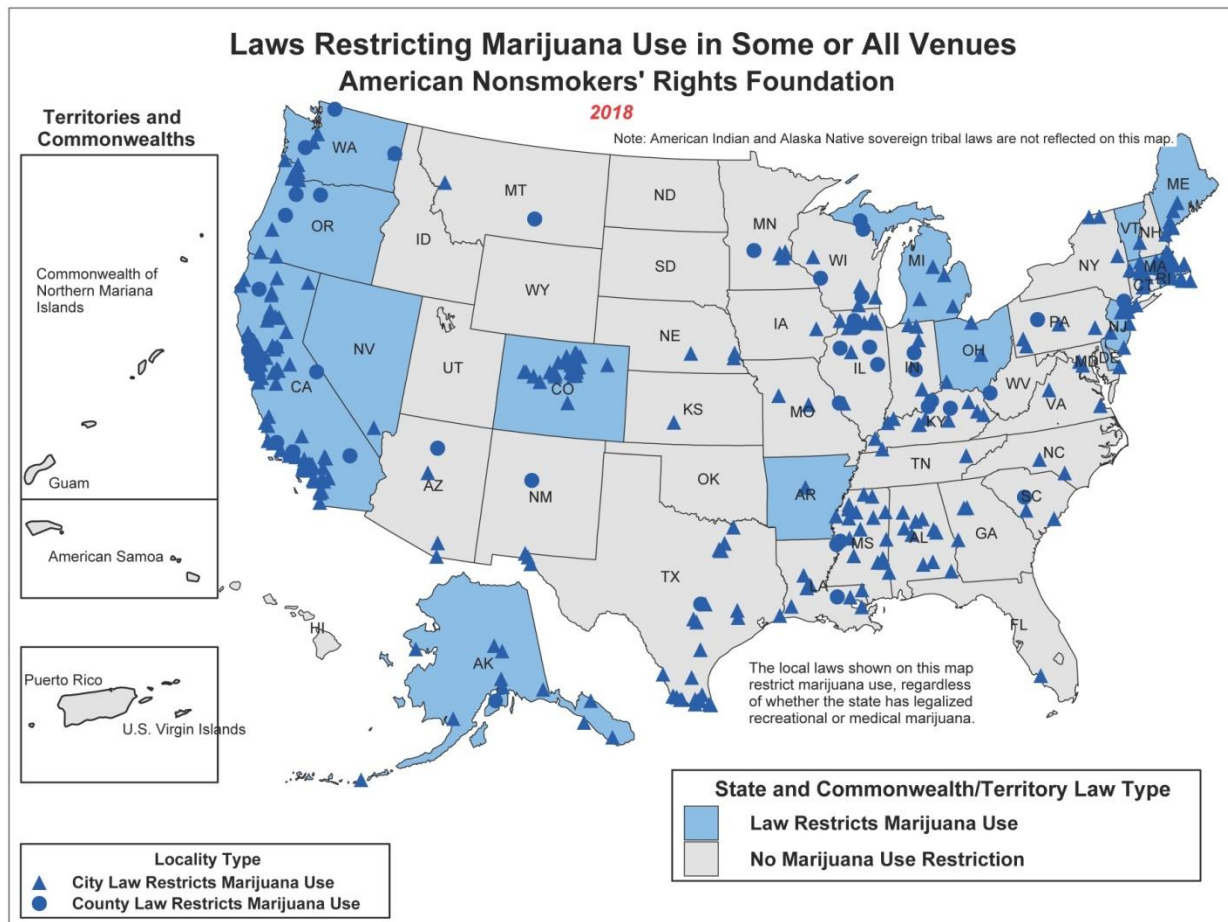
Ohio has legalized medical marijuana, and not recreational use, but even so, marijuana proponents are trying to normalize its use with tactics like “Buddie the Marijuana Mascot.”



Tobacco & Marijuana Smokefree Policy Trends

Laws addressing marijuana have grown from approximately 30 local laws in January 2014, to 68 local laws in January 2015 and 143 local laws in January 2016.

As of October 2018, there are approximately 396 municipalities and 15 states that restrict marijuana use in smokefree spaces in some manner. In addition, colleges and universities are also addressing marijuana in tobacco-free campus policies. There are now at least 1,853 campus sites that are 100% tobacco-free; of these, 1,790 also prohibit e-cigarette use, 920 also prohibit hookah use, and 311 also prohibit smoking/ vaping marijuana. These numbers are the sum total of all laws/policies in the U.S. Tobacco Control Laws Database[®] that address or mention marijuana.



Resources and Recommendations

Legalization and commercialization of marijuana is posing significant challenges for public health in general. Marijuana, legal or not, still creates secondhand smoke, which is a form of indoor air pollution. If we truly want safe, healthy, smokefree spaces, then they should be free from particulate matter created by tobacco cigarette smoke, marijuana smoke, and secondhand aerosol from electronic smoking devices.

Therefore, ANR's model policies and ordinances have included marijuana as one of the products that cannot be used in a smokefree environment since 2010:

"Smoking" means inhaling, exhaling, burning, or carrying any lighted or heated cigar, cigarette, pipe, hookah, or any other lighted or heated tobacco or plant product intended for inhalation, including **marijuana**, whether natural or synthetic, in any manner or in any form. "Smoking" includes the use of an electronic smoking device which creates an aerosol or vapor, in any manner or in any form, or the use of any oral smoking device for the purpose of circumventing the prohibition of smoking in this Article.

KEY RECOMMENDATIONS:

- Refer to **ANR's Model 100% Smokefree Ordinance for language** on including marijuana in smokefree policies.
- **Track and expose** opposition activities.
- If you haven't already done so, **add electronic smoking devices** to your smokefree laws.
- Be prepared for **proposed roll-backs of smokefree protections and redefining "public."**
- **Stick to the secondhand smoke health message**, even when referring to use of medical marijuana. Regardless of how one feels about marijuana use, no one should have to breathe secondhand marijuana smoke at work, in public, or where they live.

To assist the tobacco control movement with facts and resources about secondhand marijuana smoke, we have created a few fact sheets and infographics. Visit nonsmokersrights.org/marijuana-smoke for these resources. Our subject matter experts are also available to speak to groups and coalitions about preparing for and responding to marijuana secondhand smoke issues and policies. Contact us at 510-841-3032 or anr@no-smoke.org.

ⁱ Hillier, FC.; et al. "Concentration and particle size distribution in smoke from marijuana cigarettes with different Δ^9 -tetrahydrocannabinol content." *Fundamental and Applied Toxicology*. Volume 4, Issue 3, Part 1, June 1984, Pages 451-454. <http://www.sciencedirect.com/science/article/pii/0272059084902021>

ⁱⁱ "Air and Health: Particulate Matter." National Environmental Public Health Tracking Network, U. S. Environmental Protection Agency. <http://ephtracking.cdc.gov/showAirHealth.action#ParticulateMatter>

ⁱⁱⁱ Moir, D., et al., A comparison of mainstream and sidestream marijuana and tobacco cigarette smoke produced under two machine smoking conditions. *Chem Res Toxicol* 21: 494-502. (2008). <http://www.ncbi.nlm.nih.gov/pubmed/18062674>

^{iv} "Evidence on the Carcinogenicity of Marijuana Smoke." Reproductive and Cancer Hazard Assessment Branch, Office of Environmental Health Hazard Assessment, California Environmental Protection Agency. August 2009. http://oehha.ca.gov/prop65/hazard_ident/pdf_zip/FinalMJsmokeHID.pdf

^v Wang, X., et al., "Brief exposure to marijuana secondhand smoke impairs vascular endothelial function" (conference abstract). *Circulation* 2014; 130: A19538. http://circ.ahajournals.org/content/130/Suppl_2/A19538.abstract

^{vi} "Evidence on the Carcinogenicity of Marijuana Smoke." Reproductive and Cancer Hazard Assessment Branch, Office of Environmental Health Hazard Assessment, California Environmental Protection Agency. August 2009. http://oehha.ca.gov/prop65/hazard_ident/pdf_zip/FinalMJsmokeHID.pdf

^{vii} Wang, X., et al., "Brief exposure to marijuana secondhand smoke impairs vascular endothelial function" (conference abstract). *Circulation* 2014; 130: A19538. http://circ.ahajournals.org/content/130/Suppl_2/A19538.abstract

^{viii} Ibid

^{ix} Springer, M.L.; Glantz, S.A. "Marijuana Use and Heart Disease: Potential Effects of Public Exposure to Smoke," University of California at San Francisco. April 13, 2015.

^x Jaques, P, Zalay, M, Huang, A, Jee, K, Schick, SF "Measuring Aerosol Particle Emissions from Cannabis Vaporization and Dabbing", Proceedings of the 15th Meeting of the International Society for Indoor Air Quality and Climate. July 22-27, 2018. Philadelphia, PA.

^{xi} Herrmann ES, et al., "Non-smoker exposure to secondhand cannabis smoke II: Effect of room ventilation on the physiological, subjective, and behavioral/cognitive effects." *Drug and Alcohol Dependence*. 2015 Jun 1;151:194-202.

<http://www.ncbi.nlm.nih.gov/pubmed/25957157>

^{xii} Associated Press. "Marijuana may be contaminated with mold, mildew." CBS News, December 2, 2013.

<http://www.cbsnews.com/news/marijuana-contaminated-with-mold-mildew/>

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