



January 2020

## Secondhand Marijuana Smoke Key Messages

**Please note:** This document is not a fact sheet and should not be disseminated to the public or policymakers.

### **Permitting marijuana smoking and vaping indoors is a step back for Colorado communities.**

- Secondhand marijuana smoke is a complex chemical mixture of smoke emitted from combusted marijuana and the smoke that is exhaled by the user.
- Smoke-free policies are proven to reduce exposure to secondhand smoke, provide incentives to quit smoking, help denormalize smoking behavior, and are particularly effective among youth and young adults who are vulnerable to visual cues and social norms of smoking.<sup>1</sup>

### **Secondhand marijuana smoke is similar to secondhand tobacco smoke in many ways.**

- There is strong evidence that marijuana smoke, both firsthand and secondhand, contains many of the same cancer-causing chemicals as tobacco smoke.<sup>2</sup>
  - Some of the known carcinogens or toxins present in marijuana smoke include: acetaldehyde, ammonia, arsenic, benzene, cadmium, chromium, formaldehyde, hydrogen cyanide, isoprene, lead, mercury, nickel, and quinoline.<sup>3</sup>
- Extreme secondhand exposure to marijuana smoke (such as one hour of exposure in an unventilated space), may be associated with psychomotor impairment and an increase in heart rate.<sup>4</sup>

<sup>1</sup> <https://www.thecommunityguide.org/findings/tobacco-use-and-secondhand-smoke-exposure-smoke-free-policies>

<sup>2</sup> Colorado Department of Public Health and Environment. Marijuana Health Monitoring and Research Program. Monitoring Health Concerns Related to Marijuana in Colorado. 2018

<sup>3</sup> 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>

<sup>4</sup> ibid



**Everyone has the right to breathe smoke-free and vapor-free air.**

- Smoke-free and vapor-free policies protect workers and the public from exposure to health hazards caused by exposure to secondhand smoke and secondhand vapor.
- Allowing marijuana smoking and vaping in indoor settings will create a newly unprotected class of workers.
- All Coloradans deserve clean air to breathe without having to worry about secondhand smoke or breathing in vape chemicals.
- Research indicates that particle concentrations from dabbing and vaporizing marijuana can create levels of indoor air pollution that are hazardous to human health.<sup>5</sup>
- The American Society for Heating, Refrigeration, and Air Conditioning Engineering (ASHRAE) is the organization that develops engineering standards for building ventilation systems. ASHRAE now bases its ventilation standard for acceptable indoor air quality on an environment that is completely free from secondhand tobacco smoke, secondhand marijuana smoke, and emissions from electronic smoking devices.<sup>6</sup>

**In order to protect public health, improve consistency, and aid enforcement, smoke-free and vapor-free laws for public places and workplaces should include tobacco as well as marijuana, whether it is smoked or aerosolized.**

- Allowing marijuana smoking or vaping in places where smoking and vaping are now prohibited could undermine laws that protect the public from exposure to secondhand smoke and secondhand vapor.

---

<sup>5</sup> 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.

<sup>6</sup> ANSI/ASHRAE Standard 62.1-2016 – Ventilation for Acceptable Indoor Air Quality. Atlanta, GA: American Society of Heating, Refrigerating, and Air-Conditioning Engineers, Inc. <https://www.ashrae.org/technical-resources/standards-and-guidelines/read-only-versions-of-ashrae-standards>



### **Recommendations for local communities:**

- Ensure public health has a “seat at the table” during all discussions pertaining to marijuana hospitality businesses.
- “Opt-out”: communities may enact a moratorium on the operation of marijuana hospitality businesses. Communities that take no action will leave open the option of enactment of a resolution or ordinance from local leaders to allow the operation of marijuana hospitality businesses.
- Outside smoking: to protect against the potential harms of secondhand marijuana smoke and aerosol exposure, all smoking and vaping activity should take place outdoors and out of sight from the general public.

Visit <https://www.colorado.gov/marijuana> for additional information.