

# Review Of Literature Assessing Effects Of The Location and Density Of Retail Cannabis Outlets

The Cannabis Research Center (CRC) conducted a systematic review of the scientific research literature for the years 2010-2024 to identify peer-reviewed articles on the location, number and/or density of cannabis dispensaries/outlets (density=number of outlets in a given area). We summarized the results below to provide information to community members and organizations focusing on this issue. This summary was not intended for scientific purposes. The CRC is not advocating for any position and created this summary to be a guide for discussions related to the location and number/density of cannabis outlets.

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## CONTEXT

Many research studies have shown that when there is a greater availability of alcohol in a community (such as more outlets selling alcohol), there is an increase in alcohol use and related problems including crime. Similar studies on the availability of cannabis are beginning to be conducted. Availability of alcohol or cannabis increases if there are more outlets in a town, city or neighborhood or near someone's residence. How close outlets are to each other or to locations where youth are more likely to be (e.g., schools, residential areas) is also important to consider. Closer proximity to outlets may make it easier for youth and others to obtain and use these substances and make use seem common and acceptable.

We cannot assume we will see the same problems associated with the availability of cannabis as have been identified with alcohol simply because the two substances are different. As legalization of adult-use cannabis is becoming more common across states, the availability of cannabis is rapidly changing. Positive as well as negative effects may be observed with increases in the proximity to or number/density of cannabis outlets. Because of the consistent research findings that a greater number or density of alcohol outlets is linked to increased use and related harms, the [Community Preventive Services Task Force](#) recommends the use of regulations (e.g., through licensing and zoning) to limit alcohol outlet density. Until more information is known about the effects of cannabis outlets, communities may want to place limits on the number/density and locations of outlets. It is easier to loosen controls than to place restrictions after outlets are already established.

In the summary below, the studies primarily focus on the number/density of or proximity to outlets that sell cannabis products *exclusively*. In many states, strict regulations were placed on the number and location of these outlets. In Minnesota, retail outlets that sell cannabis products exclusively (i.e., dispensaries) will not begin to be licensed until 2025. However, as of September 2024, over 4000 businesses in Minnesota are registered to sell hemp-derived THC<sup>1</sup> products, and these retailers, that include convenience stores, coffee shops and breweries among many others, have few regulations. Hence, the effects of the location and number/density of cannabis outlets in Minnesota, which would include both businesses selling hemp-derived THC products and those exclusively selling cannabis products, may be different compared to other states.

<sup>1</sup>THC (tetrahydrocannabinol) is the part of the cannabis or hemp plant that produces intoxicating effects; hemp-derived products have relatively lower levels of THC.

## SUMMARY OF LITERATURE

**Teen use:** *Some evidence across studies that increased density of outlets (or decreased distance from home to outlet) was not associated with more frequent cannabis use, but overall there are mixed results.*

- One review: Limited to no evidence to support an association between greater cannabis retail access and increased frequent cannabis use in adolescents
- Three studies: Increased outlet density or decreased distance to outlet was associated with higher likelihood of use
- Two studies: No association between outlet density or distance to outlet and likelihood of use
- One study (Oregon only): Greater outlet density associated with more smoking and use of edibles and dabs for 11<sup>th</sup> graders but not 8<sup>th</sup> graders (no association between outlet density and vaping)
- One study (25 states): Different results depending on how outlet density was measured and type of substance

**Young adult use:** *Some evidence across studies that increased outlet density (or decreased distance from home to outlet) was associated with increased young adult cannabis use*

- One review: Consistent associations between greater access and frequent or disordered cannabis use in adults and young adults (7/11; 64%)
- One study (Los Angeles County only): no association between distance to outlet and likelihood of use

**Adult use:** *Some evidence across studies that increased outlet density (or decreased distance from home to outlet) was associated with increased cannabis use among adults*

- One review: Consistent associations between greater access and frequent or disordered cannabis use in adults and young adults (7/11; 64%)
- One study (California only): Shorter drive time to next retailer was associated with higher odds of testing positive for cannabis; highest odds for women living < 5 min drive time to next retailer and those having 6+ retailers within 15 minute drive time from their residence

**Crime:** *No conclusion (only three studies that have conflicting results)*

- One study (Denver area): Increased outlet density was associated with decrease in crime
- One study (large cities in Washington): Increased outlet density was associated with increase in crime in low SES neighborhoods
- One study (Denver): Outlet density was unrelated to property and violent crimes in local areas but higher outlet density in neighboring areas was associated with higher rates of property, violent and cannabis-specific crime

**Traffic crashes:** *No conclusion due to limited and mixed results*

- One study (Canada): No association between outlet density and traffic deaths/injuries
- One review: Of the studies reviewed, only one assessed outlet density and traffic crashes and it found no association. The other studies assessed the opening of retail stores or compared states with and without retail outlets—of these, two showed some increase in adverse traffic-related outcomes with having retail stores, two showed no effect and one found increases in traffic fatalities in Colorado, but not in Washington

**ER visits/hospitalizations/poison control calls:** *Some evidence across studies that increased outlet density (or decreased distance from home to outlet) was associated with increased ER visits, hospitalizations or poison control calls directly due to cannabis (but not for events only potentially related to cannabis)*

- One review: Most consistent associations between greater access and ER visits, hospitalizations, or poison control calls *directly* due to cannabis; limited to no evidence to support an association

between greater cannabis retail access and ER visits, hospitalizations, or poison control calls *potentially* related to cannabis (vomiting, self-harm, psychosis)

**Opioid mortality:** *No conclusion (only one study)*

- One study (23 states): An increase from one to two cannabis retailers in a county was associated with an 17% reduction in opioid-related mortality rates; Increase from two to three dispensaries was associated with an additional 8.5% reduction

**Other factors**

- One study (CA only) found that banning cannabis retail outlets with storefronts was the most effective policy to reduce outlet density; also found that higher income areas had stronger cannabis retail policies
- Several studies (US and Canada): Higher outlet density was found in communities with lower socioeconomic status

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## CONCLUSIONS

**What does the Cannabis Research Center recommend going forward?**

Although there is some evidence that greater density of cannabis retail outlets in a community is associated with more cannabis use among adults, more research is certainly needed to assess how cannabis outlets affect use and related issues. Until more information is known, communities may want to consider placing limits on the number/density and locations of outlets. If it is found that the location or number of cannabis outlets does not seem to create problems in a community, the limits could be reduced or lifted at a later date. Removing or reducing limits on the density/number or location of outlets is much easier than placing new limits once outlets are open and operating.

**PROJECT TEAM**

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