Adult Cannabis Use in Rhode Island: Changes in Demographic Characteristics Among Self-Reported Cannabis Users from 2017 to 2024

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INTRODUCTION

Rhode Island (RI) legalized medical use cannabis in 2006 and adult use cannabis in 2022. Adult use sales, sometimes referred to as recreational or non-medical use, began in December 2022. Adult use cannabis is only legal for purchase at state-licensed dispensaries for those 21 years of age or older; however, medical cannabis patients with qualifying medical conditions can be younger than 21. RI cannabis use trends have followed a pattern seen nationally after state legalization; youth cannabis use has either maintained or decreased, while adult use has increased.[1,2]

The RI Behavioral Risk Factor Surveillance System (BRFSS) is the only survey in RI that measures self-reported cannabis use by adults that is representative of the entire RI population. The BRFSS survey is administered annually by the Rhode Island Department of Health (RIDOH) with support from the Centers for Disease Control and Prevention (CDC) through a phone survey of RI residents. In 2017, the RI BRFSS survey included cannabis use questions for the first time, and from 2017 to 2024, self-reported cannabis use among RI adults nearly doubled. To inform prevention efforts, this study aims to identify population groups reporting increased cannabis use.

METHODS

We obtained weighted data from the RI BRFSS from 2017 to 2024 which surveys RI residents ages 18 years and older. Survey results were weighted to represent the adult population of RI. We identified current cannabis users as people who self-reported using cannabis one or more days within the past 30 days. These results were reported stratified by demographic information, including: sex, age, race/ethnicity, sexual orientation/gender identity, and education level. In line with the US Census, race/ethnicity was defined as: White Non-Hispanic, Hispanic, Multiracial and Other Race Non-Hispanic (Asian, American Indian/Alaska Native, Native Hawaiian/Other Pacific Islander, and Other Race) and Black Non-Hispanic. Sexual orientation/gender identity was defined as: LGBTQ+ (lesbian, gay, bisexual, transgender or other) or straight, cisgender. Education levels included less than high school, high school graduate, some college or technical school, and college graduate. The prevalence of current cannabis use was calculated from all RI BRFSS respondents within that demographic category to evaluate changes in prevalence by sociodemographic characteristics.

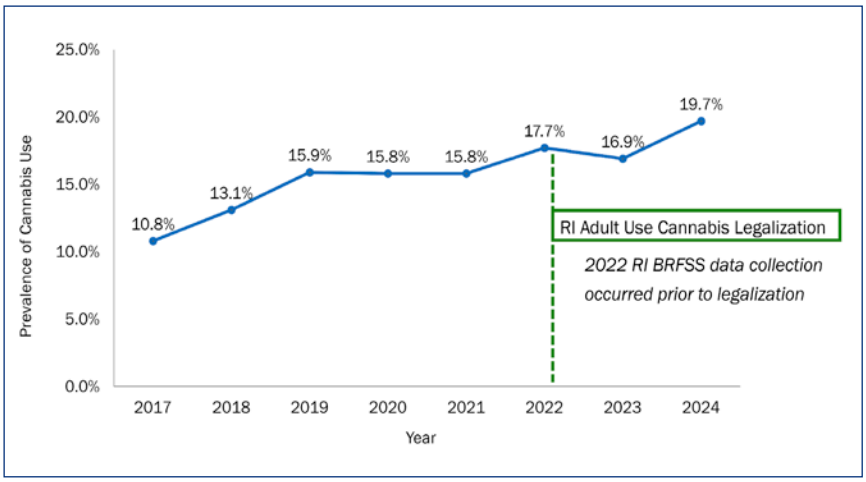
All weighted frequencies were reported. The percent change was calculated using the row prevalence percentages. All analyses were performed in SAS [Version 9.4].

RESULTS

From 2017 to 2024, self-reported cannabis use in the past 30 days increased 82.4% among RI adults, from 10.8% to 19.7% [**Figure 1**; **Table 1**]. In 2024, an estimated 143,898 adults in RI used cannabis in the past 30 days.

While more males than females reported using cannabis in both 2017 and 2024 (14.7% vs. 7.1%; 23.3% vs. 16.4%), the percent change of females reporting current cannabis use increased by 131.0% from 2017 to 2024 compared to a 58.5% increase in males. By age, older age groups saw larger increases in current cannabis use from 2017 to 2024. Adults

Figure 1. Current Cannabis Use Among Adults ages 18 Years and Older, Rhode Island 2017–2024



Data Source: Rhode Island Behavioral Risk Factor Surveillance System, 2017–2024

Table 1. Demographics of Rhode Island Residents Ages 18 Years and Older who Used Cannabis in 2017 and 2024 with the Percent Change Between Years

	2017 Cannabis Use in Past 30 Days		2024 Cannabis Use in Past 30 Days		Percent change in Current Cannabis Use
	Yes n (%)	No n (%)	Yes n (%)	No n (%)	
Total	76,206 (10.8%)	628,487 (89.2%)	143,898 (19.7%)	584,845 (80.3%)	82.4%
Sex					
Female	26,937 (7.1%)	350,016 (92.9%)	61,159 (16.4%)	311,787 (83.6%)	131.0%
Male	47,942 (14.7%)	278,057 (85.3%)	82,739 (23.3%)	273,058 (76.7%)	58.5%
Age (years)					
18–20	5,804 (20.3%)	22,736 (79.7%)	9,411 (24.1%)	29,636 (75.9%)	18.7%
21–24	12,099 (22.3%)	42,102 (77.7%)	15,487 (31.0%)	34,428 (69.0%)	39.0%
25–34	23,271 (21.2%)	86,304 (78.8%)	36,783 (31.2%)	81,230 (68.8%)	47.2%
35–44	11,851 (11.5%)	91,489 (88.5%)	29,108 (25.8%)	83,502 (74.2%)	124.3%
45–54	8,132 (6.9%)	110,138 (93.1%)	18,811 (18.4%)	83,290 (81.6%)	166.7%
55–64	12,431 (9.5%)	118,009 (90.5%)	19,225 (16.2%)	99,297 (83.8%)	70.5%
65 and older	2,617 (1.6%)	157,711 (98.4%)	15,071 (8.0%)	173,462 (92.0%)	400.0%
Race/Ethnicity					
White, Non-Hispanic	58,433 (11.0%)	473,175 (89.0%)	110,939 (22.0%)	392,204 (78.0%)	100.0%
Hispanic	7,349 (8.5%)	78,653 (91.5%)	14,142 (12.7%)	97,068 (87.3%)	49.4%
Multiracial and Other Race, Non-Hispanic±	4,620 (10.7%)	38,723 (89.3%)	7,775 (14.0%)	47,834 (86.0%)	30.8%
Black, Non-Hispanic	5,254 (16.3%)	27,033 (83.7%)	7,395 (19.3%)	30,875 (80.7%)	18.4%
Sexual Orientation & Gender Identity					
LGBTQ+*	9,083 (23.0%)	30,376 (77.0%)	27,822 (33.7%)	54,660 (66.3%)	46.5%
Straight, cisgender	66,945 (10.4%)	577,770 (89.6%)	115,684 (18.1%)	524,448 (81.9%)	74.0%
Education					
Less than high school	12,024 (13.5%)	77,167 (86.5%)	7,870 (10.9%)	64,013 (89.1%)	-19.3%
High school graduate	23,645 (12.3%)	168,027 (87.7%)	41,448 (20.7%)	158,945 (79.3%)	68.3%
Some college or technical school	27,011 (13.0%)	181,204 (87.0%)	47,688 (23.5%)	155,197 (76.5%)	80.8%
College graduate	13,491 (6.3%)	199,869 (93.7%)	46,893 (18.7%)	203,275 (81.3%)	196.8%

Note: Percentages will not add to 100% as this analysis is the percent of current cannabis users out of the overall demographic category.
±Multiracial and Other Race Non-Hispanic includes Asian, American Indian/Alaska Native, Native Hawaiian/Other Pacific Islander, and Other Race.
*LGBTQ+ includes lesbian, gay, bisexual, transgender, queer and other.

65 years and older saw a 400.0% increase, followed by a 166.7% increase in 45-to-54-year-olds, and 124.3% increase among 35-to-44-year-olds. The 18-to-20-year-old age group, a subpopulation not able to legally purchase adult use cannabis, saw the smallest percent increase of 18.7% from 2017 to 2024.

Among racial and ethnicity groups, white non-Hispanic adults saw the largest change with a 100% increase in cannabis use from 2017 to 2024. Among respondents who self-identified as LGBTQ+, there were higher rates of current cannabis use compared to the straight cisgender population in both 2017 and 2024 (23.0% vs. 10.4%, 33.7% vs. 18.1%). However, when analyzing the percent change from 2017 to 2024, the prevalence of cannabis use among straight cisgender adults increased by 74.0% compared to 46.5% among LGBTQ+ adults. When broken down by educational attainment, RI adults who had less than a high school education saw a decrease (–19.3%) in prevalence of current cannabis use, while RI adults with a college degree saw a 196.8% increase.

DISCUSSION

Cannabis use among RI adults ages 18 and older increased by 82% from 2017 to 2024. While current cannabis use increased in most populations, some demographic groups saw larger increases, including females and individuals ages 35 to 54 and ages 65 years and older. This is concerning as cannabis use has been tied to several short- and long-term negative health effects including: impairing coordination,

reaction times and problem-solving skills; causing anxiety, psychosis, delusions, hallucinations, or schizophrenia; and damaging the respiratory and cardiovascular system. Individuals can also develop cannabis use disorder, which can further negatively impact their physical, mental, and social well-being.[3]

While more men than women report using cannabis, both in RI and in other research,[4] a greater increase in cannabis use was seen among female individuals in recent years. This is a concern for adults of child-bearing age as one in three pregnancies in RI are unplanned and in addition to harms to the parent, prenatal cannabis use can result in adverse pregnancy outcomes.[5,6] Prior to legalization, 25% of mothers reported preconception cannabis use, which has likely increased with increasing cannabis use among females in recent years.[7] Counseling from a healthcare provider for people who are pregnant or may become pregnant can provide education on the harms of cannabis use and preconception or prenatal exposure.[8] Unfortunately, from 2021–2023, 50% of mothers did not receive preconception counseling.[6]

Older adults ages 65 years and older had the biggest increase in cannabis use. This increase is important to monitor as many older adults have comorbidities, such as cardiovascular or respiratory health conditions, that may put them at higher risk of negative health outcomes from cannabis use.[9] Older adults may be taking pharmaceutical medications, such as anticoagulants, antiepileptics, benzodiazepines or opioids, that could interact negatively with cannabis, whether they take cannabis medicinally or for recreational use.[10] Recent cannabis use can also affect mental health and cognitive functioning including memory, attention, coordination and movement, which can impact driving or fall risk.[11] Due to the medicinal nature of cannabis, it is possible that more older adults are using cannabis to help with medical conditions such as chronic pain or cancer treatment. It is strongly advised that adults with any medical conditions talk with a medical professional before using cannabis for recreational or medicinal use purposes. Further, adults who are using cannabis now may be unprepared as the psychoactive component in cannabis that causes the high, Delta-9-tetrahydrocannabinol (THC), has exponentially increased in the past 30 years.[12] Research has shown that high concentration THC (anything over 15%) can result in worse health outcomes, yet most cannabis sold in dispensaries is above 20% THC.[13]

There are many interventions and funding streams that focus on education, outreach, and prevention for adolescents and young adults; however, this analysis shows a need for specific messaging directed to older adults and female individuals who are looking to become pregnant, as these are both high-risk demographic groups and have seen an increase in self-reported cannabis use from 2017 to 2024.

There are many different factors that may have led to these increases, including but not limited to legalization of adult use cannabis in Massachusetts, Connecticut, and Rhode Island in 2017, 2021, and 2022, respectively. Connecticut saw a similar increase in current cannabis use in adults ages 18 and older, with adults ages 55 years and older having the largest increase in use from 2017 to 2022.[15] Comparable data were not available for Massachusetts. Attitudes and stigma towards cannabis has been shifting over time as well, leading to increasing rates of adults using cannabis across the United States (U.S.).[4] In contradiction to the increase in cannabis use among the older populations, the age groups of 18-to-20-year-olds, 21-to-24-year-olds and 25-to-34-year-olds saw increases in use yet at much smaller rates than the older age groups. Despite concerns, cannabis legalization has not been shown to cause significant increases in youth and young adults using cannabis.[14] Possible factors that may be affecting this include restricted access to cannabis through regulations and existing prevention efforts focused on the younger populations.

Limitations include potential underreporting of cannabis use due to biases present in self-reporting, and/or higher self-reported cannabis use in 2024 as legalization may have changed attitudes and willingness to report cannabis use. Unfortunately, we cannot identify if respondents are medical marijuana patients, using cannabis to treat a medical condition, or are using cannabis recreationally.

Similar to trends across the U.S., RI is seeing increasing use of cannabis among adults post-legalization. This analysis shows the importance of funding cannabis survey questions to continue data collection and public health monitoring trends of cannabis use, as this is the only data source capable of monitoring cannabis use in the general RI population. Future analyses will evaluate more details about current cannabis users, such as frequency, routes, and intentions of use. Efforts and funding for education and harm reduction messaging should focus on adult populations as cannabis use has increased among individuals 18 years and older.

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