Young Adult Health Survey: What Are We Seeing After 11 Years of Data Collection?

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1

Before we get started…

- Special thank you to Sarah Mariani, Kasey Kates, Rachel Oliver, and Megan Stowe
- Thanks to all of you for your interest in this topic!

2

Washington Young Adult Health Survey (YAHS)

- Funded by Division of Behavioral Health & Recovery (DBHR):
  - Sarah Mariani
  - Kasey Kates
  - Rachel Oliver
  - Megan Stowe
- Young Adult Health Survey Team:
  - Jason Kilmer
  - Mary Larimer
  - Rose Lyles-Riebli
  - Joseph Lambuth
  - Isaac Rhew

Washington State Health Care Authority (Division of Behavioral Health and Recovery) (PI: Kilmer).

3

Young Adult Health Survey Recruitment… A Reminder of the Main Steps

- Participants recruited using a combination of direct mail advertising to a random sample from DOL, as well as online advertising (Facebook, Craigslist, Instagram, study web site, etc.)
- Assessed demographics on ongoing basis and modified strategies to recruit under-represented groups
- Convenience sample, not a random sample

4

Post-stratification weighting and analyses

- To improve generalizability, used post-stratification weights based on sex, race, and geographic region
- Weighted results are consistently very similar to non-weighted

5

Young Adult Health Survey

- Each year we collect data from a new cohort of 18-25 year olds

6

Sample sizes over time

- Cohort 1 (2014): 2,101
- Cohort 2 (2015): 1,675
- Cohort 3 (2016): 2,493
- Cohort 4 (2017): 2,342
- Cohort 5 (2018): 2,412
- Cohort 6 (2019): 1,942
- Cohort 7 (2020) 1,643
- Cohort 8 (2021): 1,756
- Cohort 9 (2022): 1,110
- Cohort 10 (2023): 1,237
- Cohort 11 (2024): 1,751
- **TOTAL: 20,462**

7

Young Adult Health Survey

- In 2024, we also followed up with each of the previous 10 cohorts (participants in Cohort 1, 18-25 in 2014, were largely 28-35 when we collected data from them in 2024)

8

Sex

Sex	Cohort 1 (2014)	Cohort 2 (2015)	Cohort 3 (2016)	Cohort 4 (2017)	Cohort 5 (2018)	Cohort 6 (2019)	Cohort 7 (2020)	Cohort 8 (2021)	Cohort 9 (2022)	Cohort 10 (2023)	Cohort 11 (2024)	Total across all 11 years
Female	59.26%	66.99%	69.11%	68.57%	70.40%	68.07%	65.00%	68.00%	62.25%	61.76%	64.25%	66.26%
Male	40.74%	33.01%	30.89%	31.43%	29.60%	31.93%	35.00%	32.00%	37.75%	38.24%	35.75%	33.74%

9

Race/Ethnicity	Cohort 1 (2014)	Cohort 2 (2015)	Cohort 3 (2016)	Cohort 4 (2017)	Cohort 5 (2018)	Cohort 6 (2019)	Cohort 7 (2020)	Cohort 8 (2021)	Cohort 9 (2022)	Cohort 10 (2023)	Cohort 11 (2024)	Total across 11 years
Caucasian/White, non-Hispanic	68.63%	69.07%	63.90%	63.71%	62.73%	59.94%	57.52%	58.83%	55.59%	50.12%	51.34%	60.97%
Hispanic, any race	9.14%	8.72%	12.76%	15.24%	15.42%	19.21%	18.87%	17.03%	19.64%	25.22%	19.47%	15.82%
Asian/Asian-American, non-Hispanic	11.71%	12.06%	12.23%	10.29%	10.99%	10.87%	12.78%	13.21%	13.42%	11.96%	15.59%	12.13%
More than one race, non-Hispanic	5.85%	6.45%	7.30%	7.64%	7.50%	6.08%	7.85%	7.35%	7.66%	9.22%	9.08%	7.36%
Black/African-American, non-Hispanic	2.09%	1.49%	1.56%	1.28%	1.70%	1.91%	1.52%	2.11%	1.98%	1.78%	3.14%	1.84%
Other, non-Hispanic	0.71%	0.84%	0.92%	0.81%	0.70%	0.46%	0.67%	0.85%	1.26%	0.57%	0.46%	0.74%
American Indian/Alaskan Native, non-Hispanic	1.00%	0.84%	0.88%	0.68%	0.58%	1.29%	0.43%	0.28%	0.18%	0.65%	0.29%	0.68%
Native Hawaiian/Pacific Islander, non-Hispanic	0.86%	0.54%	0.44%	0.34%	0.37%	0.26%	0.37%	0.34%	0.27%	0.49%	0.63%	0.45%

10

Geographic Region of Washington

Region	Cohort 1 (2014)	Cohort 2 (2015)	Cohort 3 (2016)	Cohort 4 (2017)	Cohort 5 (2018)	Cohort 6 (2019)	Cohort 7 (2020)	Cohort 8 (2021)	Cohort 9 (2022)	Cohort 10 (2023)	Cohort 11 (2024)	Total across 11 years
Eastern Washington	19.51%	17.01%	21.34%	22.50%	21.93%	24.05%	20.51%	18.00%	17.12%	20.78%	17.76%	20.34%
Western Washington (King County and north)	54.78%	58.27%	52.51%	49.91%	50.83%	45.67%	54.84%	56.49%	55.05%	50.77%	57.97%	53.10%
Western Washington (Pierce County and south)	25.70%	24.72%	26.15%	27.58%	27.24%	30.28%	24.65%	25.51%	27.84%	28.46%	24.27%	26.57%

11

What do we see with eleven years of data?

12

Any past year "recreational"/non-medical/personal use: Cohorts 4-8 higher than Cohort 1

	Cohort 1 (2014)	Cohort 2 (2015)	Cohort 3 (2016)	Cohort 4 (2017)	Cohort 5 (2018)	Cohort 6 (2019)	Cohort 7 (2020)	Cohort 8 (2021)	Cohort 9 (2022)	Cohort 10 (2023)	Cohort 11 (2024)	Total across 11 years
18-20	43.27%	44.82%	40.94%	43.41%	44.42%	43.68%	40.39%	44.89%	39.11%	36.57%	39.00%	**42.18%**
21-25	43.67%	47.09%	46.55%	49.75%	50.87%	49.61%	52.29%	55.21%	53.60%	51.90%	52.00%	**49.76%**
TOTAL	**43.51%**	**46.29%**	**44.76%**	**47.43%**	**48.49%**	**47.24%**	**47.94%**	**51.19%**	**47.26%**	**46.24%**	**46.44%**	**46.91%**

Cohort 1 vs. Cohorts 2-11:

Compared to Cohort 1, significantly higher prevalence for

- Cohort 4 (t=2.29, p<.05; odds ratio = 1.171; Cohort 4 has 17% higher odds of non-medical cannabis use than Cohort 1)
- Cohort 5 (t=2.96, p<.01; odds ratio = 1.222; Cohort 5 has 22% higher odds of non-medical cannabis use than Cohort 1)
- Cohort 6 (t=2.11, p<.05; odds ratio = 1.163; Cohort 6 has 16% higher odds of non-medical cannabis use than Cohort 1)
- Cohort 7 (t=2.41, p<.05; odds ratio = 1.196; Cohort 7 has 20% higher odds of non-medical cannabis use than Cohort 1)
- Cohort 8 (t=4.19, p<.001; odds ratio = 1.362; Cohort 8 has 36% higher odds of non-medical cannabis use than Cohort 1)

Source: Young Adult Health Survey, Preliminary Data Report to DBHR, March 2025, Kilmer (PI)

13

Any past year "recreational"/non-medical/personal use: Significant increasing linear trend for 18-25-year-olds

	Cohort 1 (2014)	Cohort 2 (2015)	Cohort 3 (2016)	Cohort 4 (2017)	Cohort 5 (2018)	Cohort 6 (2019)	Cohort 7 (2020)	Cohort 8 (2021)	Cohort 9 (2022)	Cohort 10 (2023)	Cohort 11 (2024)	Total across 11 years
18-20	43.27%	44.82%	40.94%	43.41%	44.42%	43.68%	40.39%	44.89%	39.11%	36.57%	39.00%	**42.18%**
21-25	43.67%	47.09%	46.55%	49.75%	50.87%	49.61%	52.29%	55.21%	53.60%	51.90%	52.00%	**49.76%**
TOTAL	**43.51%**	**46.29%**	**44.76%**	**47.43%**	**48.49%**	**47.24%**	**47.94%**	**51.19%**	**47.26%**	**46.24%**	**46.44%**	**46.91%**

Linear trend from Cohort 1 to Cohort 11:

Significant (t=2.41, p<.05; odds ratio = 1.0127; odds of non-medical cannabis use are 1.3% higher with each successive year/cohort)

Age by cohort interaction:

- Significant, reflecting the differences in the linear trend seen in the stratified models below (t=4.38, p<.001)

Source: Young Adult Health Survey, Preliminary Data Report to DBHR, March 2025, Kilmer (PI)

14

Any past year "recreational"/non-medical/personal use: Significant decreasing trend for 18-20, increasing trend for 21-25

	Cohort 1 (2014)	Cohort 2 (2015)	Cohort 3 (2016)	Cohort 4 (2017)	Cohort 5 (2018)	Cohort 6 (2019)	Cohort 7 (2020)	Cohort 8 (2021)	Cohort 9 (2022)	Cohort 10 (2023)	Cohort 11 (2024)	Total across 11 years
18-20	43.27%	44.82%	40.94%	43.41%	44.42%	43.68%	40.39%	44.89%	39.11%	36.57%	39.00%	**42.18%**
21-25	43.67%	47.09%	46.55%	49.75%	50.87%	49.61%	52.29%	55.21%	53.60%	51.90%	52.00%	**49.76%**
TOTAL	**43.51%**	**46.29%**	**44.76%**	**47.43%**	**48.49%**	**47.24%**	**47.94%**	**51.19%**	**47.26%**	**46.24%**	**46.44%**	**46.91%**

Model split by over/under 21

18-20: Newly significant decreasing trend (t = -2.31, p<.05)

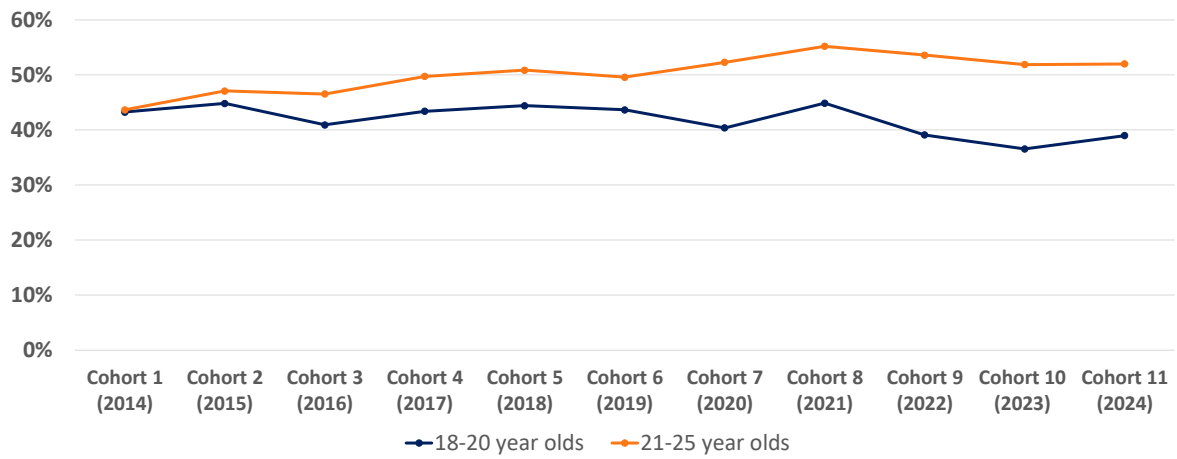
21-25: Significant increasing trend over time (t=5.36, p<.001)

Source: Young Adult Health Survey, Preliminary Data Report to DBHR, March 2025, Kilmer (PI)

15

Source: Young Adult Health Survey, Preliminary Data Report to DBHR, March 2025, Kilmer (PI)

Non-medical (or "recreational") use in the past year by age group



16

At least monthly "recreational"/non-medical/personal use: Cohorts 5-9 and 11 higher than Cohort 1

	Cohort 1 (2014)	Cohort 2 (2015)	Cohort 3 (2016)	Cohort 4 (2017)	Cohort 5 (2018)	Cohort 6 (2019)	Cohort 7 (2020)	Cohort 8 (2021)	Cohort 9 (2022)	Cohort 10 (2023)	Cohort 11 (2024)	Total across 11 years
18-20	24.08%	24.88%	21.19%	23.56%	27.06%	23.24%	23.17%	24.16%	26.21%	20.15%	24.21%	**23.85%**
21-25	23.63%	23.56%	25.12%	28.07%	27.88%	29.55%	33.81%	33.86%	31.65%	30.87%	29.06%	**28.33%**
TOTAL	**23.81%**	**24.03%**	**23.84%**	**26.46%**	**27.62%**	**27.09%**	**29.90%**	**30.11%**	**29.19%**	**26.87%**	**26.98%**	**26.67%**

Cohort 1 vs. Cohorts 2-11:

Compared to Cohort 1, significantly higher prevalence for

- Cohort 5 (t=2.56, p<.01; odds ratio = 1.221, Cohort 5 has 22% higher odds of non-medical cannabis use than Cohort 1)
- Cohort 6 (t=2.08, p<.05; odds ratio = 1.189, Cohort 6 has 19% higher odds of non-medical cannabis use than Cohort 1)
- Cohort 7 (t=3.73, p<.001; odds ratio = 1.365, Cohort 7 has 37% higher odds of non-medical cannabis use than Cohort 1)
- Cohort 8 (t=3.88, p<.001; odds ratio = 1.379, Cohort 8 has 38% higher odds of non-medical cannabis use than Cohort 1)
- Cohort 9 (t=2.99, p<.01; odds ratio = 1.320, Cohort 9 has 32% higher odds of non-medical cannabis use than Cohort 1)
- Cohort 11 (t=1.99, p<.05; odds ratio = 1.183, Cohort 11 has 18% higher odds of non-medical cannabis use than Cohort 1)

Source: Young Adult Health Survey, Preliminary Data Report to DBHR, March 2025, Kilmer (PI)

17

At least monthly "recreational"/non-medical/personal use: Significant increasing trend for 18-25-year-olds

	Cohort 1 (2014)	Cohort 2 (2015)	Cohort 3 (2016)	Cohort 4 (2017)	Cohort 5 (2018)	Cohort 6 (2019)	Cohort 7 (2020)	Cohort 8 (2021)	Cohort 9 (2022)	Cohort 10 (2023)	Cohort 11 (2024)	Total across 11 years
18-20	24.08%	24.88%	21.19%	23.56%	27.06%	23.24%	23.17%	24.16%	26.21%	20.15%	24.21%	**23.85%**
21-25	23.63%	23.56%	25.12%	28.07%	27.88%	29.55%	33.81%	33.86%	31.65%	30.87%	29.06%	**28.33%**
TOTAL	**23.81%**	**24.03%**	**23.84%**	**26.46%**	**27.62%**	**27.09%**	**29.90%**	**30.11%**	**29.19%**	**26.87%**	**26.98%**	**26.67%**

Linear trend from Cohort 1 to Cohort 11:

Significant increasing trend over time (t=4.41, p<.001; Odds ratio = 1.026)

Age by cohort interaction:

Significant (t=2.67, p<.01)

Source: Young Adult Health Survey, Preliminary Data Report to DBHR, March 2025, Kilmer (PI)

18

At least monthly "recreational"/non-medical/personal use: Significant increasing trend for 21-25-year-olds

	Cohort 1 (2014)	Cohort 2 (2015)	Cohort 3 (2016)	Cohort 4 (2017)	Cohort 5 (2018)	Cohort 6 (2019)	Cohort 7 (2020)	Cohort 8 (2021)	Cohort 9 (2022)	Cohort 10 (2023)	Cohort 11 (2024)	Total across 11 years
18-20	24.08%	24.88%	21.19%	23.56%	27.06%	23.24%	23.17%	24.16%	26.21%	20.15%	24.21%	**23.85%**
21-25	23.63%	23.56%	25.12%	28.07%	27.88%	29.55%	33.81%	33.86%	31.65%	30.87%	29.06%	**28.33%**
TOTAL	**23.81%**	**24.03%**	**23.84%**	**26.46%**	**27.62%**	**27.09%**	**29.90%**	**30.11%**	**29.19%**	**26.87%**	**26.98%**	**26.67%**

Model split by over/under 21

18-20: No significant linear trend

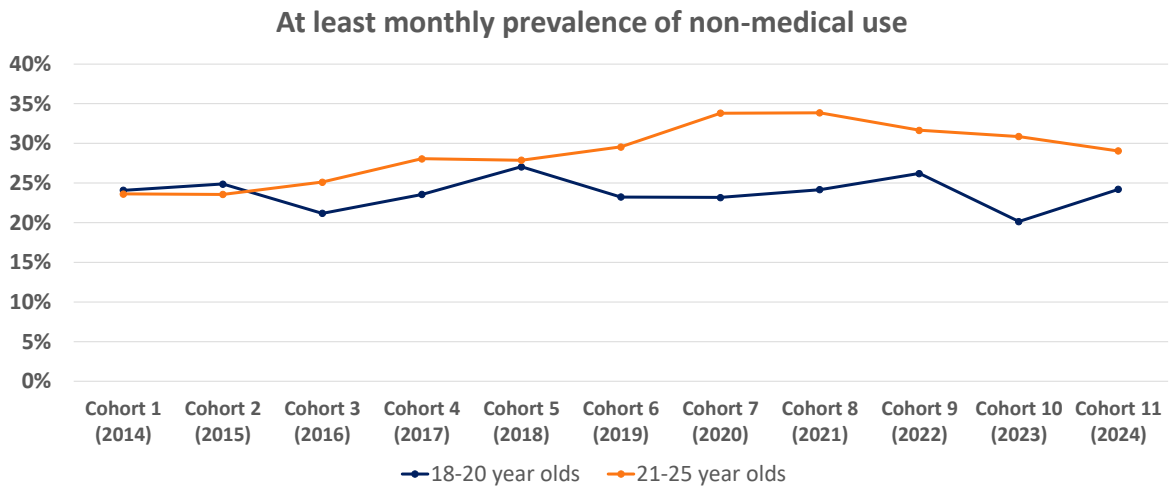
21-25: Significant increasing trend over time (t=5.97, p<.001)
Odds ratio = 1.061 (odds of non-medical cannabis use are 6.1% higher with each successive year/cohort)

Source: Young Adult Health Survey, Preliminary Data Report to DBHR, March 2025, Kilmer (PI)

19

Source: Young Adult Health Survey, Preliminary Data Report to DBHR, February 2024, Kilmer (PI)

At least monthly non-medical (or "recreational") use by age group



20

At least weekly "recreational"/non-medical/personal use: Cohorts 7, 8, and 10 higher than Cohort 1

	Cohort 1 (2014)	Cohort 2 (2015)	Cohort 3 (2016)	Cohort 4 (2017)	Cohort 5 (2018)	Cohort 6 (2019)	Cohort 7 (2020)	Cohort 8 (2021)	Cohort 9 (2022)	Cohort 10 (2023)	Cohort 11 (2024)	Total across 11 years
18-20	16.51%	13.43%	13.30%	15.40%	18.56%	14.41%	15.21%	16.86%	16.40%	14.42%	15.12%	**15.50%**
21-25	16.86%	16.21%	18.55%	18.42%	19.22%	21.39%	24.07%	24.59%	21.93%	24.89%	19.74%	**20.10%**
TOTAL	**16.72%**	**15.23%**	**16.85%**	**17.37%**	**19.03%**	**18.59%**	**20.84%**	**21.62%**	**19.47%**	**20.84%**	**17.76%**	**18.37%**

Cohort 1 vs. Cohorts 2-11:

Cohort 7 is significantly higher than Cohort 1 (t=2.86, p<.01, Odds ratio = 1.311)

Cohort 8 is significantly higher than Cohort 1 (t=3.37, p<.001, Odds ratio = 1.374)

Cohort 10 is significantly higher than Cohort 1 ((t=2.61, p<.01, Odds ratio = 1.311)

Source: Young Adult Health Survey, Preliminary Data Report to DBHR, March 2025, Kilmer (PI)

21

At least weekly "recreational"/non-medical/personal use: Significant increasing trend for 18-25-year-olds

	Cohort 1 (2014)	Cohort 2 (2015)	Cohort 3 (2016)	Cohort 4 (2017)	Cohort 5 (2018)	Cohort 6 (2019)	Cohort 7 (2020)	Cohort 8 (2021)	Cohort 9 (2022)	Cohort 10 (2023)	Cohort 11 (2024)	Total across 11 years
18-20	16.51%	13.43%	13.30%	15.40%	18.56%	14.41%	15.21%	16.86%	16.40%	14.42%	15.12%	**15.50%**
21-25	16.86%	16.21%	18.55%	18.42%	19.22%	21.39%	24.07%	24.59%	21.93%	24.89%	19.74%	**20.10%**
TOTAL	**16.72%**	**15.23%**	**16.85%**	**17.37%**	**19.03%**	**18.59%**	**20.84%**	**21.62%**	**19.47%**	**20.84%**	**17.76%**	**18.37%**

Linear trend

Significant (t=4.06, p<.001); Odds ratio = 1.028

Age by cohort interaction:

Newly non-significant

Source: Young Adult Health Survey, Preliminary Data Report to DBHR, March 2025, Kilmer (PI)

22

At least weekly "recreational"/non-medical/personal use: Significant increasing trend for 21-25-year-olds

	Cohort 1 (2014)	Cohort 2 (2015)	Cohort 3 (2016)	Cohort 4 (2017)	Cohort 5 (2018)	Cohort 6 (2019)	Cohort 7 (2020)	Cohort 8 (2021)	Cohort 9 (2022)	Cohort 10 (2023)	Cohort 11 (2024)	Total across 11 years
18-20	16.51%	13.43%	13.30%	15.40%	18.56%	14.41%	15.21%	16.86%	16.40%	14.42%	15.12%	**15.50%**
21-25	16.86%	16.21%	18.55%	18.42%	19.22%	21.39%	24.07%	24.59%	21.93%	24.89%	19.74%	**20.10%**
TOTAL	**16.72%**	**15.23%**	**16.85%**	**17.37%**	**19.03%**	**18.59%**	**20.84%**	**21.62%**	**19.47%**	**20.84%**	**17.76%**	**18.37%**

Model split by over/under 21

18-20:

- No significant linear trend

21-25:

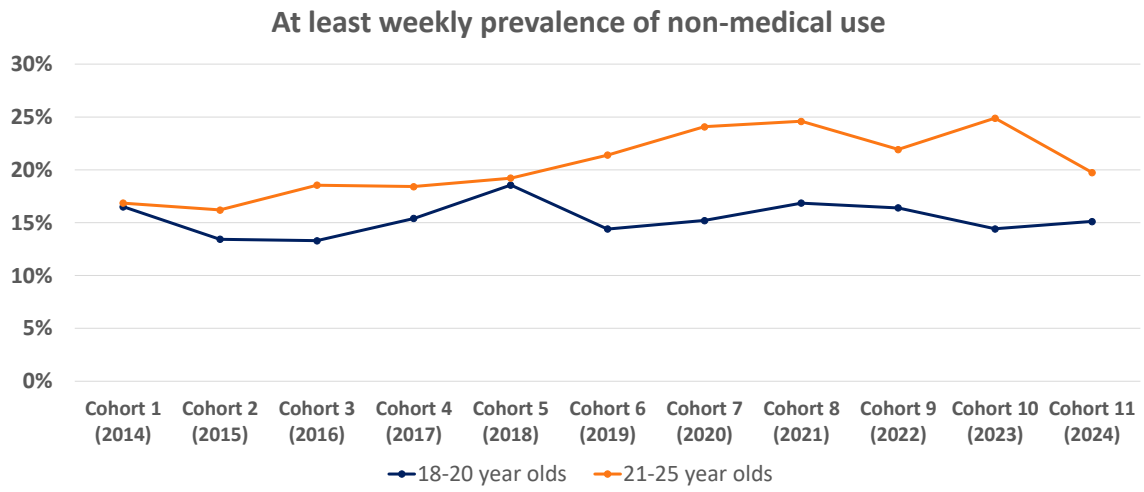
- Significant increasing trend over time (t=5.23, p<.001; odds ratio = 1.044, odds of non-medical cannabis use are 4.4% higher with each successive year/cohort)

Source: Young Adult Health Survey, Preliminary Data Report to DBHR, March 2025, Kilmer (PI)

23

Source: Young Adult Health Survey, Preliminary Data Report to DBHR, March 2025, Kilmer (PI)

At least weekly non-medical (or "recreational") use by age group



24

Non-medical use, categories of frequency, whole sample

	Cohort 1 2014	Cohort 2 2015	Cohort 3 2016	Cohort 4 2017	Cohort 5 2018	Cohort 6 2019	Cohort 7 2020	Cohort 8 2021	Cohort 9 2022	Cohort 10 2023	Cohort 11 2024
Never	56.49%	53.71%	55.24%	52.57%	51.51%	52.76%	52.06%	48.81%	52.74%	53.76%	53.56%
Once a year	7.53%	8.28%	8.00%	6.36%	6.67%	6.41%	5.86%	7.13%	5.70%	5.75%	6.19%
2-3x/year	8.58%	9.60%	9.72%	10.21%	10.52%	9.77%	8.76%	9.79%	9.23%	9.38%	9.62%
Every other month	3.59%	4.38%	3.20%	4.40%	3.68%	3.97%	3.42%	4.15%	3.13%	4.25%	3.64%
Once a month	3.15%	3.55%	3.06%	3.58%	3.24%	3.72%	4.29%	3.67%	2.87%	2.33%	4.30%
2-3x/month	3.94%	5.24%	3.94%	5.51%	5.35%	4.77%	4.77%	4.82%	6.86%	3.70%	4.92%
1x/week	2.49%	2.75%	2.90%	2.38%	2.61%	2.92%	3.36%	3.23%	3.12%	3.43%	2.99%
More than 1x/wk	5.26%	4.39%	4.63%	4.29%	4.81%	4.63%	5.25%	6.36%	5.16%	4.37%	4.73%
Every other day	2.63%	3.44%	2.35%	3.55%	3.60%	2.85%	3.93%	4.29%	3.06%	2.64%	2.21%
Every day	6.34%	4.65%	6.97%	7.14%	8.01%	8.19%	8.30%	7.74%	8.14%	10.39%	7.82%

Cohort 4-10 all significantly higher odds of more frequent cannabis use than Cohort 1.

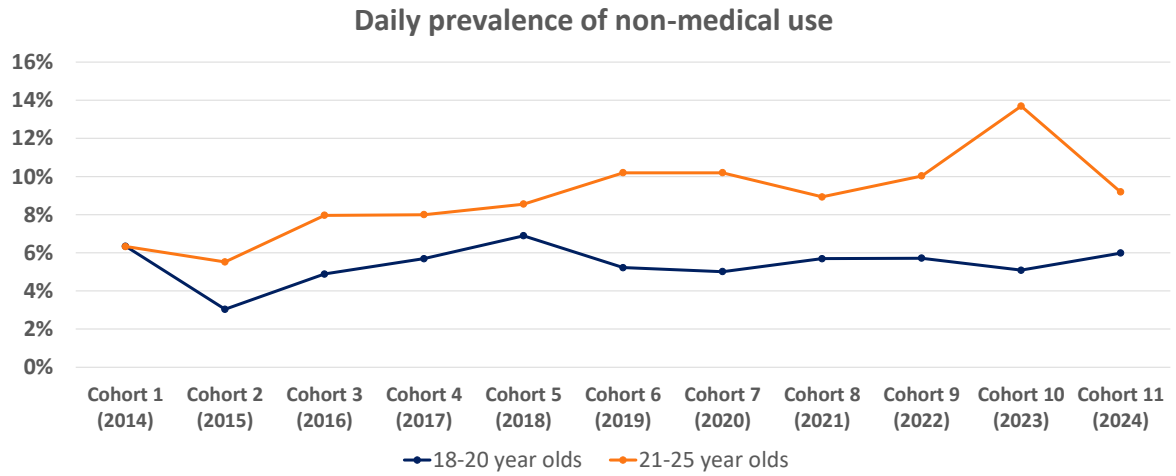
Linear trend from Cohort 1 to Cohort 11:
Significant increasing trend over time (t=3.79, p<.001, Odds ratio = 1.019)

Source: Young Adult Health Survey, Preliminary Data Report to DBHR, March 2025, Kilmer (PI)

25

Source: Young Adult Health Survey, Preliminary Data Report to DBHR, March 2025, Kilmer (PI)

Daily non-medical (or "recreational") use by age group



26

Perceived norms of non-medical cannabis use

PERCEPTIONS OF NON-MEDICAL CANNABIS

	Cohort 1 2014	Cohort 2 2015	Cohort 3 2016	Cohort 4 2017	Cohort 5 2018	Cohort 6 2019	Cohort 7 2020	Cohort 8 2021	Cohort 9 2022	Cohort 10 2023	Cohort 11 2024
Never	2.41%	2.42%	1.61%	2.31%	2.06%	1.50%	2.38%	1.92%	3.05%	2.44%	3.27%
Once a year	1.82%	2.10%	1.74%	1.92%	1.27%	0.75%	1.32%	1.15%	1.37%	1.01%	1.29%
2 to 3 times a year	8.22%	10.12%	6.73%	6.40%	3.89%	3.31%	2.23%	3.87%	3.95%	4.53%	3.75%
Every other month	6.98%	7.29%	5.32%	4.59%	3.14%	3.90%	4.42%	3.48%	2.93%	3.37%	4.13%
Once a month	9.74%	11.15%	10.41%	9.07%	6.88%	5.51%	6.39%	7.07%	6.63%	6.66%	9.09%
2-3x/month	17.98%	19.68%	19.83%	18.91%	13.47%	13.93%	14.32%	14.04%	14.38%	12.69%	15.03%
Once per week	12.65%	12.72%	15.43%	13.89%	14.28%	12.91%	12.64%	14.11%	13.24%	11.51%	14.18%
More than 1x/wk	22.08%	20.70%	21.42%	23.94%	27.12%	25.90%	28.57%	29.17%	25.76%	26.73%	23.44%
Every other day	9.27%	6.87%	8.56%	8.65%	11.10%	12.25%	13.10%	10.45%	13.14%	12.03%	11.06%
Every day	8.84%	6.95%	8.96%	10.31%	16.79%	20.03%	14.62%	14.75%	15.57%	19.02%	14.74%

*** In ordinal logistic models, Cohort 4 (t=2.57, p<.01), Cohort 5 (t=10.67, p<.001), Cohort 6 (t=12.37, p<.001), Cohort 7 (t=9.72, p<.001), Cohort 8 (t=9.02, p<.001), Cohort 9 (t=8.10, p<.001), Cohort 10 (t=9.55, p<.001), and Cohort 11 (t=6.50, p<.001) have higher perceived non-medical cannabis norms compared to cohort 1; but cohort 2 has lower norms compared to cohort 1 (t= -3.35 p<.001) ***

*** Overall, a significant increasing linear trend over time (t=16.30, p<.001) ***

In Cohort 11, 17.75% use at least weekly (meaning most, 82.25%, young adults don't use weekly or more), yet 63.42% think the typical person their age uses weekly or more often

27

Decreasing trend significant
Increasing trend significant

WHERE DO PEOPLE GET CANNABIS, 18–20-year-olds

	Cohort 1 2014	Cohort 2 2015	Cohort 3 2016	Cohort 4 2017	Cohort 5 2018	Cohort 6 2019	Cohort 7 2020	Cohort 8 2021	Cohort 9 2022	Cohort 10 2023	Cohort 11 2024
From friends	72.86%	76.24%	69.68%	77.40%	63.75%	60.74%	66.87%	65.62%	59.68%	58.06%	63.88%
Gave money to someone	23.29%	26.47%	34.72%	41.45%	39.29%	43.17%	40.55%	39.80%	37.62%	33.36%	35.45%
Got it from someone w/ medical card	17.60%	14.12%	4.30%	5.24%	2.79%	2.82%	4.27%	4.58%	4.10%	1.62%	5.02%
Got it from a medical dispensary *newly significant trend from last year's report*	13.65%	18.99%	5.58%	4.72%	6.50%	8.28%	8.41%	12.03%	3.40%	7.53%	6.96%
Got it at a party	22.99%	22.14%	23.08%	24.92%	20.12%	22.91%	8.82%	24.67%	16.43%	10.98%	13.56%
Got it from family	5.65%	5.18%	11.75%	9.75%	11.24%	10.92%	13.49%	7.09%	11.36%	9.67%	9.52%
Got it some other way	11.64%	4.12%	6.12%	9.02%	7.30%	6.21%	5.04%	6.24%	3.62%	4.28%	2.20%
Bought from retail store	0.99%	4.58%	1.73%	1.92%	2.03%	3.55%	1.58%	1.03%	3.08%	1.53%	1.71%
Got it from parents w/ permission *Note: ** Parents with permission remains the third most mentioned source by 18–20-year-olds****	5.75%	6.02%	12.33%	10.44%	11.69%	12.91%	13.08%	13.91%	12.38%	15.77%	14.00%
Grew it themselves	1.91%	1.15%	1.65%	0.23%	1.47%	2.78%	1.64%	0.42%	0.59%	0.56%	1.85%
Stole it from store/ dispensary	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	4.16%	2.40%	0.00%	0.57%	0.36%

28

Decreasing trend significant
Increasing trend significant

WHERE DO PEOPLE GET CANNABIS, 21–25-year-olds

	Cohort 1 2014	Cohort 2 2015	Cohort 3 2016	Cohort 4 2017	Cohort 5 2018	Cohort 6 2019	Cohort 7 2020	Cohort 8 2021	Cohort 9 2022	Cohort 10 2023	Cohort 11 2024
From friends	67.50%	54.89%	42.78%	36.51%	33.80%	25.72%	20.26%	26.44%	26.04%	21.17%	26.70%
Gave money to someone	19.87%	10.72%	8.10%	5.64%	4.97%	3.63%	5.08%	4.61%	7.75%	4.46%	1.27%
Got it from someone w/ medical card	18.85%	9.41%	2.53%	2.02%	0.17%	0.65%	0.27%	0.62%	1.16%	1.03%	0.21%
Got it from a med. dispensary	20.65%	13.03%	12.60%	9.96%	10.15%	14.23%	14.71%	15.62%	16.02%	16.90%	9.85%
Got it at a party	11.81%	10.76%	10.93%	8.06%	6.54%	5.76%	1.57%	7.12%	10.93%	3.87%	6.94%
Got it from family	11.48%	8.26%	4.08%	7.04%	5.76%	4.37%	4.02%	5.52%	4.56%	4.04%	5.74%
Got it some other way	5.13%	6.68%	3.29%	3.41%	3.71%	3.71%	1.24%	2.13%	1.85%	1.97%	1.29%
Bought from retail store	8.80%	51.86%	72.60%	76.31%	80.06%	78.03%	77.27%	74.42%	70.93%	72.28%	78.09%
Got it from parents w/ permission	4.56%	3.50%	2.02%	4.28%	4.47%	3.15%	2.75%	4.75%	4.41%	5.79%	1.97%
Grew it themselves	1.51%	3.01%	1.49%	1.82%	1.81%	0.71%	1.11%	1.74%	0.79%	1.16%	0.86%
Stole it from store/ dispensary	2.84%	0.17%	0.60%	0.29%	0.17%	0.11%	0.97%	0.43%	0.69%	0.78%	0.46%

29

Model with cohort x age interaction significant for:

- Getting cannabis from friends: decline is stronger for those 21-25 compared to those 18-20 (t= -4.43, p < .001)
- Gave money to someone: increasing for those 18-20, decreasing for those 21-25 (t= -6.63, p<.001)
- Got it from someone w/med. cannabis card: those 21+ had sharper declining trend than <21 (t= -4.14, p<.001)
- Got it from family: no change for 18-20, significant decline for those 21-25 (t= -2.49, p<.05)
- Bought it from retail store: Those 21-25 have increasing trend, no change 18-20 (t=4.14, p<.001)
- Got it from parents w/permission: increasing for 18-20, no change for 21-25 (t=-2.06, p< .05) *newly significant interaction from last year's report*
- Stole it from store/dispensary: significant increase for 18-20, no change 21-25 (t= -3.71, p<.001)

30

DRIVING AFTER CANNABIS USE

Driving after cannabis use

"During the past 30 days, how many times did you drive a car or other vehicle within three hours after using cannabis (e.g., marijuana, hashish, edibles)?"

	Cohort 1 2014	Cohort 2 2015	Cohort 3 2016	Cohort 4 2017	Cohort 5 2018	Cohort 6 2019	Cohort 7 2020	Cohort 8 2021	Cohort 9 2022	Cohort 10 2023	Cohort 11 2024
Never	50.59%	55.29%	58.19%	58.56%	58.73%	61.80%	65.00%	66.38%	64.64%	68.69%	68.10%
1 time	14.13%	13.13%	12.50%	12.85%	12.11%	8.32%	9.56%	10.25%	10.27%	7.70%	10.15%
2-3 times	13.28%	12.34%	11.97%	11.98%	10.59%	11.66%	11.24%	10.51%	11.50%	9.83%	10.09%
4-5 times	6.43%	4.35%	3.48%	4.48%	6.04%	4.00%	4.51%	4.39%	2.53%	3.40%	2.65%
6 or more times	15.57%	14.88%	13.85%	12.12%	12.52%	14.21%	9.69%	8.47%	11.05%	10.38%	9.02%

There are declines in driving after cannabis use between cohorts 3-11 and cohort 1 (cohort 3, p<.05; cohort 4, p<.01; cohort 5, p<.05; cohort 6, p<.01; cohort 7, p<.001; cohort 8, p<.001; cohort 9, p<.001; cohort 10, p<.001; cohort 11, p<.001), as well as a significant linear trend (p<.001).

31

Medical cannabis in past year
Newly significant decreasing trend over time

	Cohort 1 (2014)	Cohort 2 (2015)	Cohort 3 (2016)	Cohort 4 (2017)	Cohort 5 (2018)	Cohort 6 (2019)	Cohort 7 (2020)	Cohort 8 (2021)	Cohort 9 (2022)	Cohort 10 (2023)	Cohort 11 (2024)	Total across 11 years
18-20	14.02%	12.73%	8.33%	12.02%	12.90%	11.75%	11.43%	11.04%	10.20%	9.11%	7.92%	**11.16%**
21-25	15.20%	15.53%	14.77%	16.83%	16.80%	18.05%	15.04%	15.18%	13.37%	14.21%	10.25%	**15.26%**
TOTAL	**14.74%**	**14.54%**	**12.68%**	**15.04%**	**15.42%**	**15.53%**	**13.71%**	**13.54%**	**11.96%**	**12.22%**	**9.25%**	**13.71%**

Regression models:

Cohort 1 vs. Cohorts 2-11:	Cohort 9 (t=-1.97, p<.05) and Cohort 11 (t=-4.55, p<.001) significantly lower than Cohort 1
Linear trend from Cohort 1 to 11:	Newly significant decreasing trend over time (t = -4.30, p<.001)
Age by cohort interaction:	Non-significant

Source: Young Adult Health Survey, Preliminary Data Report to DBHR, March 2025, Kilmer (PI)

32

Medical cannabis in past year
Newly significant decreasing trend over time

	Cohort 1 (2014)	Cohort 2 (2015)	Cohort 3 (2016)	Cohort 4 (2017)	Cohort 5 (2018)	Cohort 6 (2019)	Cohort 7 (2020)	Cohort 8 (2021)	Cohort 9 (2022)	Cohort 10 (2023)	Cohort 11 (2024)	Total across 11 years
18-20	14.02%	12.73%	8.33%	12.02%	12.90%	11.75%	11.43%	11.04%	10.20%	9.11%	7.92%	**11.16%**
21-25	15.20%	15.53%	14.77%	16.83%	16.80%	18.05%	15.04%	15.18%	13.37%	14.21%	10.25%	**15.26%**
TOTAL	**14.74%**	**14.54%**	**12.68%**	**15.04%**	**15.42%**	**15.53%**	**13.71%**	**13.54%**	**11.96%**	**12.22%**	**9.25%**	**13.71%**

Model split by over/under 21

18-20:

- Newly significant decreasing trend over time (t = -2.94, p<.01)

21-25:

- Newly significant decreasing trend over time (t = -2.79, p<.01)

Source: Young Adult Health Survey, Preliminary Data Report to DBHR, March 2025, Kilmer (PI)

33

Medical cannabis

- Perceptions of medical use continue to increase significantly (both a linear trend, and past 8 cohorts higher than cohort 1)

34

Other substances

- Significant decreasing trend in:
  - Alcohol, at least once in past year
  - Alcohol, at least monthly
  - Cigarettes, at least once in the past year
  - Pain relievers to get high, at least once in the past year
  - Heroin use, at least once in the past year

35

Perceived risk

- **Cannabis**
  - Physical risk of occasional cannabis use ** newly non-significant **
  - Psychological/emotional risk of occasional cannabis use ** newly non-significant **
  - Physical risk of regular cannabis use ** newly significant **
  - Psychological/emotional risk of regular cannabis use ** newly significant **
- **Alcohol**
  - Physical risk of 2 drinks every day
  - Psychological risk of 2 drinks every day
  - Physical risk of 5+ drinks every weekend ** newly significant **
  - Psychological risk of 5+ drinks every weekend

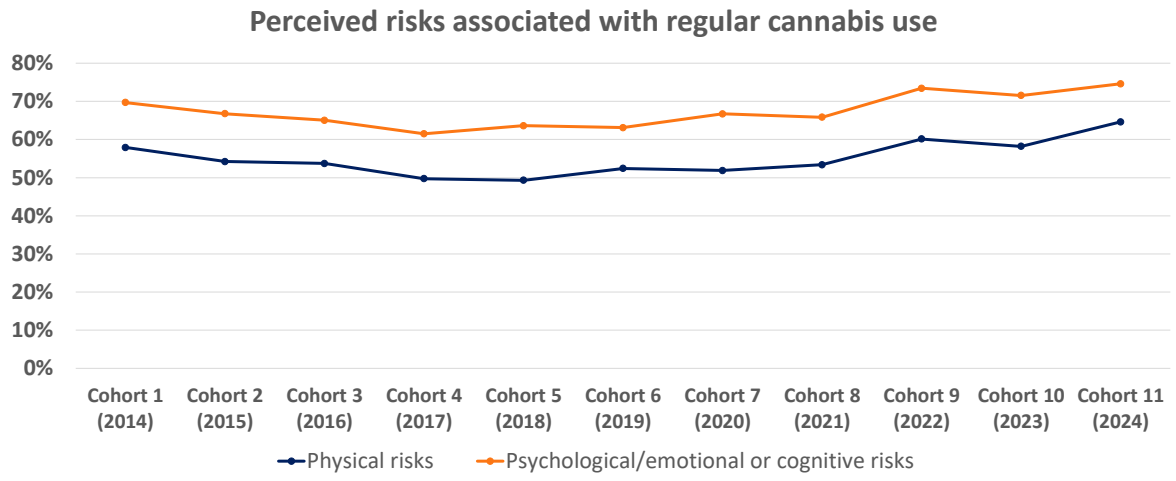
Source: Young Adult Health Survey, Preliminary Data Report to DBHR, Kilmer (PI)

** newly non-significant **
** significant increasing linear trend **

36

Source: Young Adult Health Survey, Preliminary Data Report to DBHR, March 2025, Kilmer (PI)

Percentage endorsing moderate or great risk



37

Young Adult Health Survey

- 2025 will see our 12th year of data collection

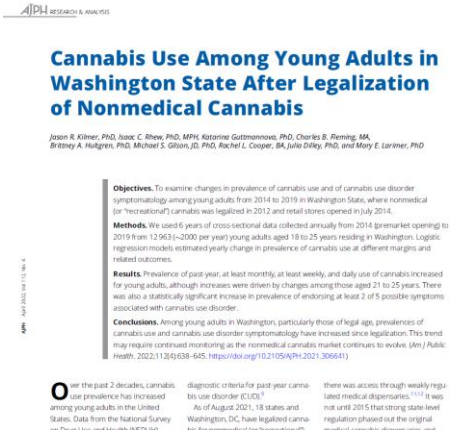
38

Young Adult Health Survey

- Dr. Katarina Guttmannova applied for and obtained a secondary data analysis grant (NIDA grant R01DA047996, PI: Guttmannova) that has led to several publications using YAHS (beyond what we pass on as part of the contract).
- Dr. Guttmannova also received a second secondary data analysis grant (NIDA R01DA057705) focusing on changes before and during the COVID-19 pandemic among young adults

39

Rhew IC, Guttmannova K, Kilmer JR, Fleming CB, Hultgren BA, Hurvitz PM, Dilley JA, Larimer ME. Associations of cannabis retail outlet availability and neighborhood disadvantage with cannabis use and related risk factors among young adults in Washington State. *Drug Alcohol Depend*. 2022 Mar 1;232:109332. doi: 10.1016/j.drugalcdep.2022.109332. Epub 2022 Jan 29. PMID: 35123361; PMCID: PMC8890768.



Kilmer JR, Rhew IC, Guttmannova K, Fleming CB, Hultgren BA, Gilson MS, Cooper RL, Dilley J, Larimer ME. Cannabis Use Among Young Adults in Washington State After Legalization of Nonmedical Cannabis. *Am J Public Health*. 2022 Apr;112(4):638-645. doi: 10.2105/AJPH.2021.306641. PMID: 35319936; PMCID: PMC8961820.

40

Journal of Adolescent Health 71 (2022) 47–54

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Original article

Trends in Alcohol, Cigarette, E-Cigarette, and Nonprescribed Pain Reliever Use Among Young Adults in Washington State After Legalization of Nonmedical Cannabis

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Keywords: Alcohol; Cannabis; Tobacco; E-cigarettes; Pain relievers; Young adults; Cannabis legalization

See Related Editorial on p.6

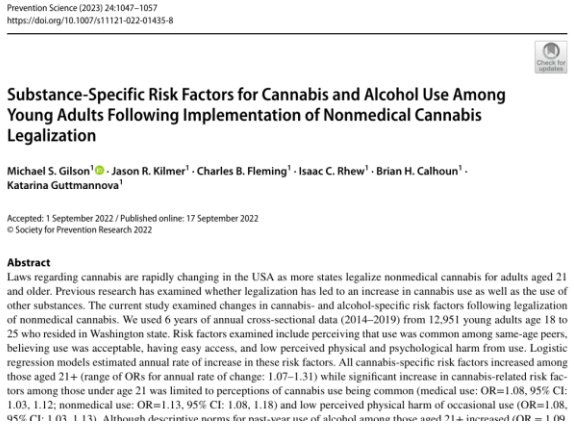
ABSTRACT

Purpose: Liberalization of cannabis laws may be accompanied by changes in the use of substances other than cannabis and changes in associations of cannabis use with other types of substance use. This study assessed (1) trends in alcohol, nicotine, and nonprescribed pain reliever use and (2) changes in associations of cannabis use with these other substances among young adults in Washington State after nonmedical cannabis legalization.

IMPLICATIONS AND CONTRIBUTION

Implementation of legalized nonmedical cannabis in Washington State was

Fleming CB, Ramirez JJ, Rhew IC, Hultgren BA, Hanson KG, Larimer ME, Dilley JA, Kilmer JR, Guttmannova K. Trends in Alcohol, Cigarette, E-Cigarette, and Nonprescribed Pain Reliever Use Among Young Adults in Washington State After Legalization of Nonmedical Cannabis. *J Adolesc Health*. 2022 Jul;71(1):47-54. doi: 10.1016/j.jadohealth.2022.03.006. Epub 2022 May 9. PMID: 35550333; PMCID: PMC9232986.



Prevention Science (2023) 24:1047–1057
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Substance-Specific Risk Factors for Cannabis and Alcohol Use Among Young Adults Following Implementation of Nonmedical Cannabis Legalization

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Accepted: 1 September 2022 / Published online: 17 September 2022

Abstract

Laws regarding cannabis are rapidly changing in the USA as more states legalize nonmedical cannabis for adults aged 21 and older. Previous research has examined whether legalization has led to an increase in cannabis use as well as the use of other substances. The current study examined changes in cannabis- and alcohol-specific risk factors following legalization of nonmedical cannabis. We used 6 years of annual cross-sectional data (2014–2019) from 12,951 young adults age 18 to 25 who resided in Washington state. Risk factors examined include perceiving that use was common among same-age peers, believing use was acceptable, having easy access, and low perceived physical and psychological harm from use. Logistic regression models estimated annual rate of increase in these risk factors. All cannabis-specific risk factors increased among those aged 21+ (range of ORs for annual rate of change: 1.07–1.31) while significant increase in cannabis-related risk factors among those under age 21 was limited to perceptions of cannabis use being common (medical use: OR=1.08, 95% CI: 1.03, 1.12; nonmedical use: OR=1.13, 95% CI: 1.08, 1.18) and low perceived physical harm of occasional use (OR=1.08, 95% CI: 1.03, 1.13). Although descriptive norms for past-year use of alcohol among those aged 21+ increased (OR = 1.09

Gilson MS, Kilmer JR, Fleming CB, Rhew IC, Calhoun BH, Guttmannova K. Substance-Specific Risk Factors for Cannabis and Alcohol Use Among Young Adults Following Implementation of Nonmedical Cannabis Legalization. *Prev Sci*. 2023 Aug;24(6):1047-1057. doi: 10.1007/s11121-022-01435-8. Epub 2022 Sep 17. PMID: 36114976; PMCID: PMC10020123.

41

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Short Communication

The association between cannabis use and risk of non-medical pain reliever misuse onset among young adults in a legal cannabis context

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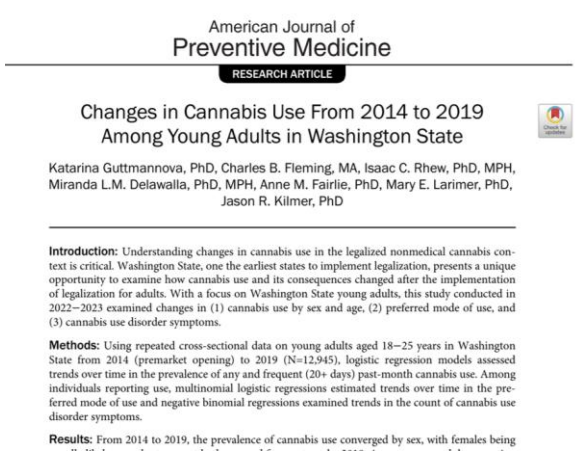
ARTICLE INFO

Keywords:
Cannabis
Prescription opioid misuse
Young adults

ABSTRACT

Background: Little is known about the prospective relationship between cannabis use and pain reliever misuse. This study examined associations of non-medical and medical cannabis use with onset of non-medical pain reliever misuse among young adults in Washington State (WA), where non-medical cannabis is legal.
Methods: Data were from a cohort-sequential study of adults 18–25 residing in WA. Four annual surveys were used from cohorts recruited in 2014, 2015, and 2016. Participants who had not reported non-medical pain reliever misuse at baseline were included in discrete time survival analyses ($N = 4,236$). Odds ratios (ORs) were estimated for new onset of non-medical pain reliever misuse in any given follow-up year over the course of three years according to baseline non-medical and medical cannabis use.
Results: When included separately in models, non-medical and medical cannabis use at baseline were associated with increased risk of non-medical pain reliever misuse adjusting for demographic characteristics as well as past year cigarette use and alcohol use (non-medical OR = 5.27; 95 % CI: 3.28, 8.48; medical OR = 2.21; 95 % CI: 1.39, 3.52). In a model including both forms of use in the model, associations of non-medical and medical cannabis use with

Rhew IC, Le VT, Ramirez JJ, Fleming CB, Kilmer JR, Delawalla MLM, Hultgren BA, Lee CM, Larimer ME, Guttmannova K. The association between cannabis use and risk of non-medical pain reliever misuse onset among young adults in a legal cannabis context. *Addict Behav.* 2023 Aug;143:107711. doi: 10.1016/j.addbeh.2023.107711. Epub 2023 Mar 30. PMID: 37011567; PMCID: PMC10168644.



American Journal of Preventive Medicine

RESEARCH ARTICLE

Changes in Cannabis Use From 2014 to 2019 Among Young Adults in Washington State

Katarina Guttmannova, PhD, Charles B. Fleming, MA, Isaac C. Rhew, PhD, MPH, Miranda L.M. Delawalla, PhD, MPH, Anne M. Fairlie, PhD, Mary E. Larimer, PhD, Jason R. Kilmer, PhD

Introduction: Understanding changes in cannabis use in the legalized nonmedical cannabis context is critical. Washington State, one the earliest states to implement legalization, presents a unique opportunity to examine how cannabis use and its consequences changed after the implementation of legalization for adults. With a focus on Washington State young adults, this study conducted in 2022–2023 examined changes in (1) cannabis use by sex and age, (2) preferred mode of use, and (3) cannabis use disorder symptoms.

Methods: Using repeated cross-sectional data on young adults aged 18–25 years in Washington State from 2014 (premarket opening) to 2019 (N=12,945), logistic regression models assessed trends over time in the prevalence of any and frequent (20+ days) past-month cannabis use. Among individuals reporting use, multinomial logistic regressions estimated trends over time in the preferred mode of use and negative binomial regressions examined trends in the count of cannabis use disorder symptoms.

Results: From 2014 to 2019, the prevalence of cannabis use converged by sex, with females being

Guttmannova K, Fleming CB, Rhew IC, Delawalla MLM, Fairlie AM, Larimer ME, Kilmer JR. Changes in Cannabis Use From 2014 to 2019 Among Young Adults in Washington State. *Am J Prev Med*. 2024 Feb;66(2):252-259. doi: 10.1016/j.amepre.2023.09.027. Epub 2023 Oct 2. PMID: 37793557; PMCID: PMC10842380.

42

Cross-Substance Associations With Transitions in Cannabis and Nicotine Use in a Statewide Sample of Young Adults in Washington State

Charles B. Fleming , [a,*] Miranda L. M. Delawalla , [a] Isaac C. Rhew , [a] Jason R. Kilmer , [a,b] Mary Larimer , [a,b] Katarina Guttmannova [a] ... Show less
+ Affiliations

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https://doi.org/10.15288/jsad.23-00055

Abstract Full Text References PDF

Objective:

Understanding transitions in nicotine and cannabis use has implications for prevention and efforts to reduce harmful use. Focusing on cross-substance associations, we examined how use of one substance was associated with year-to-year transitions in frequency of use of the other among young adults in the context of legalized non-medical cannabis.

Fleming CB, Delawalla MLM, Rhew IC, Kilmer JR, Larimer M, Guttmannova K. Cross-Substance Associations With Transitions in Cannabis and Nicotine Use in a Statewide Sample of Young Adults in Washington State. *J Stud Alcohol Drugs*. 2024 Mar;85(2):272-282. doi: 10.15288/jsad.23-00055. Epub 2023 Oct 30. PMID: 37917015; PMCID: PMC10941821.

Prevention Science
https://doi.org/10.1007/s11121-024-01679-6

Young Adult Alcohol and Cannabis Impaired Driving After the Opening of Cannabis Retail Stores in Washington State

Brittney A. Hultgren[1] · Brian H. Calhoun[1] · Charles B. Fleming[1] · Vivian H. Lyons[2,3] · Isaac C. Rhew[1] · Mary E. Larimer[1,4] · Jason R. Kilmer[1,4] · Katarina Guttmannova[1]

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Abstract
Motor vehicle crashes are a leading cause of death for young adults (YA) in the USA, and driving under the influence of alcohol (DUIA), cannabis (DUIC), and simultaneous use of both substances (DUIAC) are prominent risk factors. Trends in YA impaired driving behaviors after opening of cannabis retail stores have been understudied. We examined YA trends in DUIA, DUIC, and DUIAC from immediately prior through 5 years following the opening of cannabis retail outlets in Washington State (2014–2019). Differences in trends were assessed across age, sex, and urbanicity. Weighted logistic regressions assessed yearly change in prevalence of DUIA, DUIC, and DUIAC from 2014 to 2019, using annual statewide data from the Washington Young Adult Health Survey ($n = 12{,}963$; ages 18–25). Moderation of trends by age, sex, and urbanicity was assessed. Prevalence of DUIA decreased overall ($AOR = 0.93$, 95% CI 0.90, 0.97) and among drinkers ($AOR = 0.95$, 95% CI 0.91, 0.99) but remained at concerning levels in 2019 (10% overall; 16% among drinkers). Overall DUIC did not change significantly ($AOR = 0.99$, 95% CI 0.96, 1.03; 11% by 2019) but decreased among those who used cannabis ($AOR = 0.91$, 95% CI 0.86, 0.96; 33% by 2019). DUIAC decreased but not significantly (overall: $AOR = 0.89$, 95% CI 0.78, 1.01; those who used alcohol and cannabis: $AOR = 0.84$, 95% CI 0.74, 1.04). Prevalence of YA DUI remained concerning. Trends may reflect some success in reducing DUI, but additional detection and prevention are needed.

Keywords Driving under the influence · DUI · Alcohol · Cannabis · Young adults

Hultgren BA, Calhoun BH, Fleming CB, Lyons VH, Rhew IC, Larimer ME, Kilmer JR, Guttmannova K. Young Adult Alcohol and Cannabis Impaired Driving After the Opening of Cannabis Retail Stores in Washington State. *Prev Sci.* 2024 Jul;25(5):749-759. doi: 10.1007/s11121-024-01679-6. Epub 2024 Apr 25. PMID: 38664365; PMCID: PMC11639396.

43

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Age-related Changes in Past-Month Alcohol, Cannabis, and Simultaneous Use in a Statewide Sample of Young Adults in Washington State

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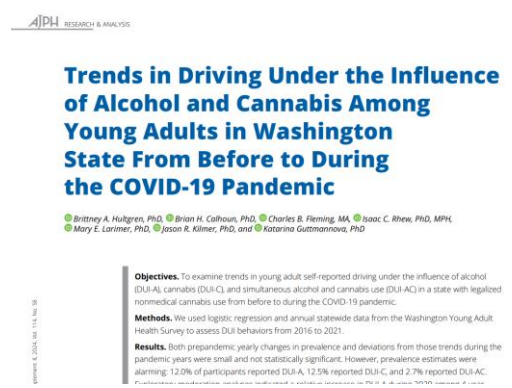
Fairlie AM, Calhoun BH, Fleming C, Delawalla MLM, Martinez G, Halvorson MA, Rhew IC, Kilmer JR, Guttmannova K. Age-related Changes in Past-Month Alcohol, Cannabis, and Simultaneous Use in a Statewide Sample of Young Adults in Washington State. J Stud Alcohol Drugs. 2024 Aug 10. doi: 10.15288/jsad.24-00065. Epub ahead of print. PMID: 39126660.



AJPH RESEARCH & ANALYSIS

Trends in Driving Under the Influence of Alcohol and Cannabis Among Young Adults in Washington State From Before to During the COVID-19 Pandemic

Brittney A. Hultgren, PhD, Brian H. Calhoun, PhD, Charles B. Fleming, MA, Isaac C. Rhew, PhD, MPH, Mary E. Larimer, PhD, Jason R. Kilmer, PhD, and Katarina Guttmannova, PhD

Objectives. To examine trends in young adult self-reported driving under the influence of alcohol (DUI-A), cannabis (DUI-C), and simultaneous alcohol and cannabis use (DUI-AC) in a state with legalized nonmedical cannabis use from before to during the COVID-19 pandemic.

Methods. We used logistic regression and annual statewide data from the Washington Young Adult Health Survey to assess DUI behaviors from 2016 to 2021.

Results. Both prepandemic yearly changes in prevalence and deviations from those trends during the pandemic years were small and not statistically significant. However, prevalence estimates were alarming: 12.0% of participants reported DUI-A, 12.5% reported DUI-C, and 2.7% reported DUI-AC.

Hultgren BA, Calhoun BH, Fleming CB, Rhew IC, Larimer ME, Kilmer JR, Guttmannova K. Trends in Driving Under the Influence of Alcohol and Cannabis Among Young Adults in Washington State From Before to During the COVID-19 Pandemic. *Am J Public Health*. 2024 Nov;114(S8):S698-S701. doi: 10.2105/AJPH.2024.307767. PMID: 39442028; PMCID: PMC11499689.

44

Two just accepted within the past couple of weeks!

1. Martinez, G., Calhoun, B., Linden-Carmichael, A., Acolin, J., Fleming, C.B., Rhew, I.C., Kilmer, J., Larimer, M.E., Guttmannova, K. (accepted). Age-varying patterns of cannabis use, related risk factors, and their associations among young adults in the context of legalized nonmedical cannabis. Accepted for publication in *Prevention Science*.
2. Fleming, C.B., Martinez, G., Rhew, I.C., Kilmer, J.R., Larimer, M.E., Guttmannova, K. (accepted). Changes in cannabis, alcohol, nicotine, and nonprescribed pain reliever use among young adults in Washington State from before to during the COVID-19 pandemic (2016–2021). Accepted for publication in the *American Journal of Preventive Medicine Focus*.

45

Within our team, two additional publications (outside of Dr. Guttmannova's secondary data analysis grants) focusing on impaired driving

Hultgren B., Guttmannova, K., Cadigan, J.M., Kilmer, J.R., Delawalla, M.L., Lee, C.M., Larimer, M.E. (2023). Differences in Young Adults' Perceptions of Injunctive Norms of Driving Under the Influence and Riding with an Impaired Driver. *Journal of Adolescent Health, 73*(5), 852-858.

Hultgren BA, Delawalla MLM, Szydlowski V, Guttmannova K, Cadigan JM, Kilmer JR, Lee CM, Larimer ME. Young adult impaired driving behaviors and perceived norms of driving under the influence of simultaneous alcohol and cannabis use. *Alcohol Clin Exp Res* (Hoboken). 2024 Dec;48(12):2319-2330. doi: 10.1111/acer.15459. Epub 2024 Dec 1. PMID: 39616528; PMCID: PMC11631637.

46

Next Steps

- Data report with findings across all 11 cohorts submitted prior to this presentation ☺
- Frequency report for Cohort 11 coming shortly
- Reports for within-cohort changes being completed
- We will send out the survey to collaborators/partners for their input on new items

47

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Thank you!

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  - Megan Stowe

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48