
Medical Cannabis Use Patterns

Products Purchased August 2022 – September 2025

Sept. 2, 2026

Medical Cannabis Use Patterns: Products Purchased August 2022 – September 2025

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Purpose

This report serves several purposes; primarily, it provides insight into real-world purchasing patterns of medical cannabis products by patients in Minnesota's medical cannabis program, including insight into patient access to medical cannabis products, needs of patients by demographic characteristics, and needs of patients with different medical qualifying conditions. Additionally, it is important to look at these trends as the adult-use cannabis market emerges to track any changes in product need for medical cannabis patients.

Minnesota medical cannabis products

Products available

Following the establishment of the state's medical cannabis program in 2014, the Minnesota Department of Health, and now the Office of Cannabis Management (OCM), accept petitions from the public for new methods of delivery for medical cannabis. Figure 1 describes delivery methods available to patients in Minnesota's medical cannabis program before the introduction of the adult-use cannabis market and includes the date in which the particular delivery method began as an allowable option for patients. There were no changes in the allowed medical cannabis delivery methods during the time period covered in this report. During this period, delivery methods included vaporized concentrate oil, sublingual sprays, oral solutions, tinctures, pills and capsules, balms and lotions, dissolvable powders, lozenges, gummies, and dried flower products. This report describes all medical cannabis purchases made in Minnesota's medical cannabis program between Aug. 1, 2022, and Sept. 22, 2025. The end date of the time period covered in this study was selected because it coincided with a procedural change affecting the level of product detail from the manufacturer appearing in Metrc, the state's seed-to-sale tracking system. During this period, there were 6,545,825 medical cannabis products purchased in 1,918,432 transactions, from 76,031 patients.

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Figure 1. Timeline of approved medical cannabis delivery methods

July 1, 2015:

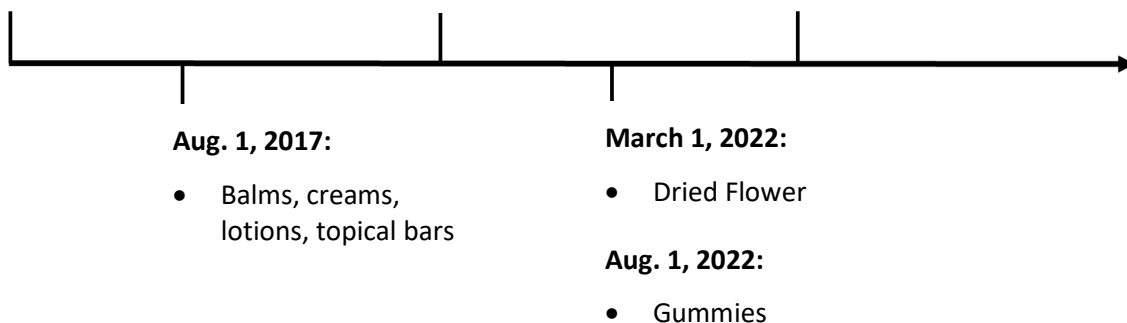
- Vaporized concentrate oil
- Sublingual sprays, oral suspensions
- Tinctures, oral solutions
- Pills, capsules

Aug. 1, 2020:

- Dissolvable tablets and powder (mixed with water)
- Lozenges

Aug. 1, 2024:

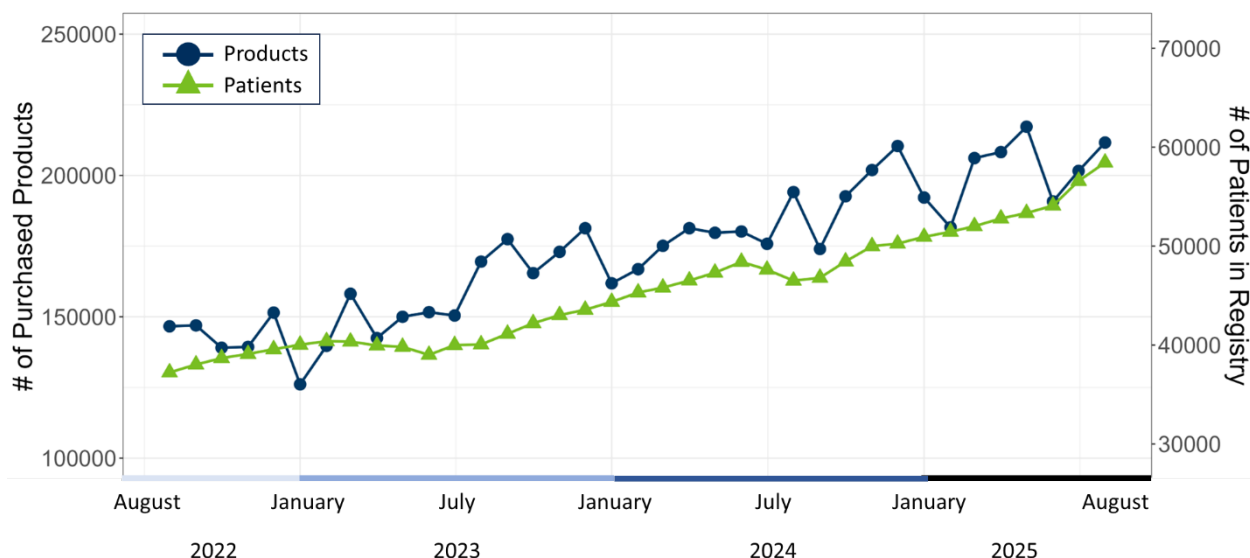
- Dry herb vaporization



The number of active patients in Minnesota’s Medical Cannabis Registry increased over the time period covered in this report, starting with 37,230 active patients in August 2022 and rising to 60,647 active patients in September 2025. This trend is illustrated with the green line with triangles in Figure 2. With the increasing number of active patients, the number of medical cannabis products purchased per month has also increased, from 146,624 products purchased in August 2022 to 211,625 in August 2025. However, the number of products purchased peaked in May 2025 at 217,233 (Figure 2, Table A1). September 2025 is not included in the figure below as the data in this report do not cover the entire month of September.

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Figure 2. Number of medical cannabis products purchased and number of patients active in the Medical Cannabis Registry per month



In almost half of purchasing transactions (49.4%), patients purchased only one or two products during their dispensary visit. About 1 in 5 (18.4%) visits have patients purchasing between five to nine products at a time, and 4.0% of visits have patients purchasing 10 or more products during their dispensary visits (Figure 3). Patients living in ZIP codes further away from a medical cannabis dispensary typically have purchasing transactions with a larger number of products (Figure 4). On average, most patients are purchasing either less than once per month ($n = 30,168$; 39.7%) or one to two times per month ($n = 37,335$; 49.1%). Only 11.5% of patients purchased more than three times per month (Figure 5).

Figure 3. Number of products purchased per transaction by medical cannabis patients

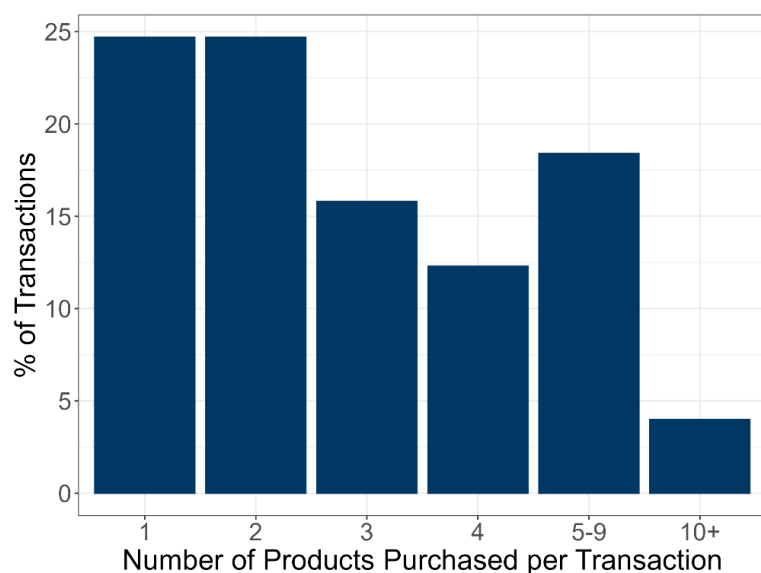


Figure 4. Average number of products purchased per transaction by patient ZIP code. A) The state of Minnesota; B) Minneapolis-St. Paul metro ZIP codes starting with 550, 551, 553, 554.

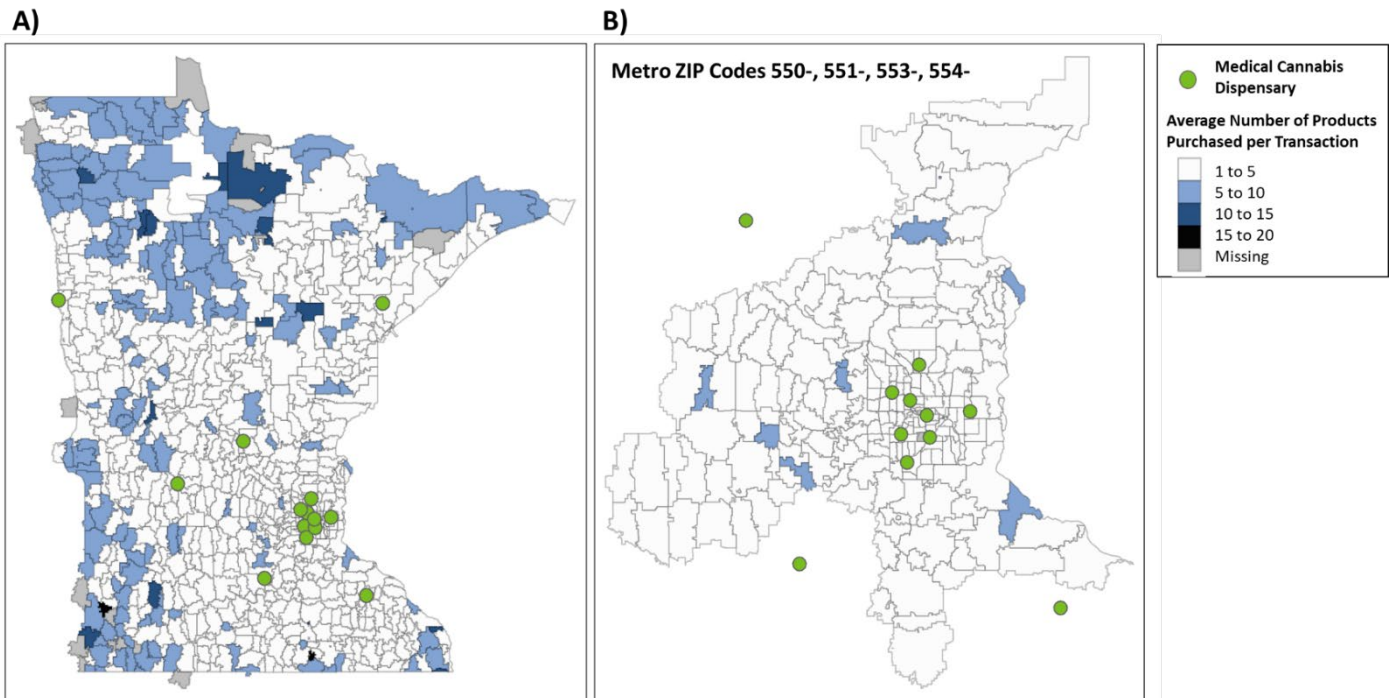
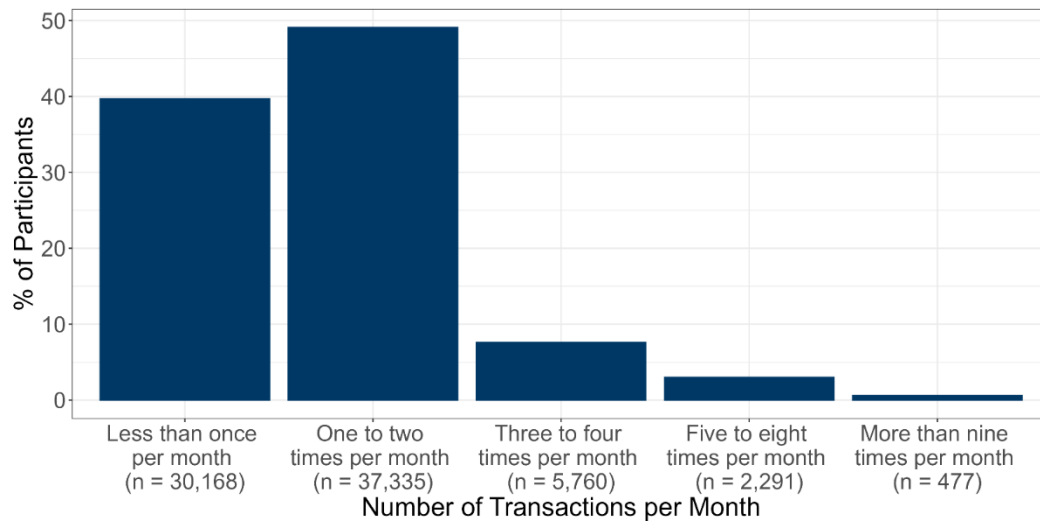


Figure 5. Number of purchase transactions per month by medical cannabis patients



Route of administration

Products included in this dataset were categorized according to their route of administration and ratio of THC to CBD contained in the product. Routes of administration include enteral, inhalation, oromucosal, and topical routes of entry into the body, as described below. THC:CBD ratios ranged from products with very high THC to CBD to those with very high CBD to THC, as well as everything in between. As of this report, products that include dried cannabis flower (e.g., ground flower, flower, preroll products) do not include THC or CBD concentration in milligrams and cannot be classified by THC:CBD ratio in the same way as other products. They are instead classified by relative values of THC and CBD by percent of product weight.

Medical cannabis products categorized by THC:CBD content ratio:

- **Very high THC to CBD:** 100:1 or higher
- **High THC to CBD:** greater than 4:1 up to 99:1
- **Balanced:** 1:1 up to 4:1
- **High CBD to THC:** less than 1:1 up to 99:1
- **Very high CBD to THC:** 100:1 or higher

Medical cannabis flower products categorized by relative values of THC and CBD (values measured as % by product weight):

- **High THC:** greater than 15%
- **Medium THC:** 5 to 15%
- **Low THC:** less than 5%
- **High CBD:** greater than 10%
- **Medium CBD:** 1 to 10%
- **Low CBD:** less than 1% or trace amount

Product routes of administration (ROA):

- **Enteral:** entry through the gastrointestinal tract via swallowing (i.e., capsules, oral solutions)
- **Inhalation:** entry through lungs (i.e., vaporized oils, smoked flower)
- **Oromucosal:** sublingual sprays and tinctures absorbed through cheek/oral mucosa
- **Topical:** applied to body surface (i.e., balms)

Inhalation products are the most commonly purchased product type. Inhalation products, including vape oils and dried cannabis flower, account for 76.3% of all products purchased. Enteral products account for 21.5% of all products purchased, oromucosal and topical products account for less than 3% of all products purchased (Figure 6). This pattern of commonly purchased routes of administration is seen throughout time (Figure 7, Table A2).

Among inhalation products, dried flower, including prerolls and other flower products, are the most commonly purchased. Flower products account for 68.9% of all inhalation products purchased, compared to vape products. This trend is seen throughout time (Figure 7, Table A2).

Figure 6. Products purchased by route of administration

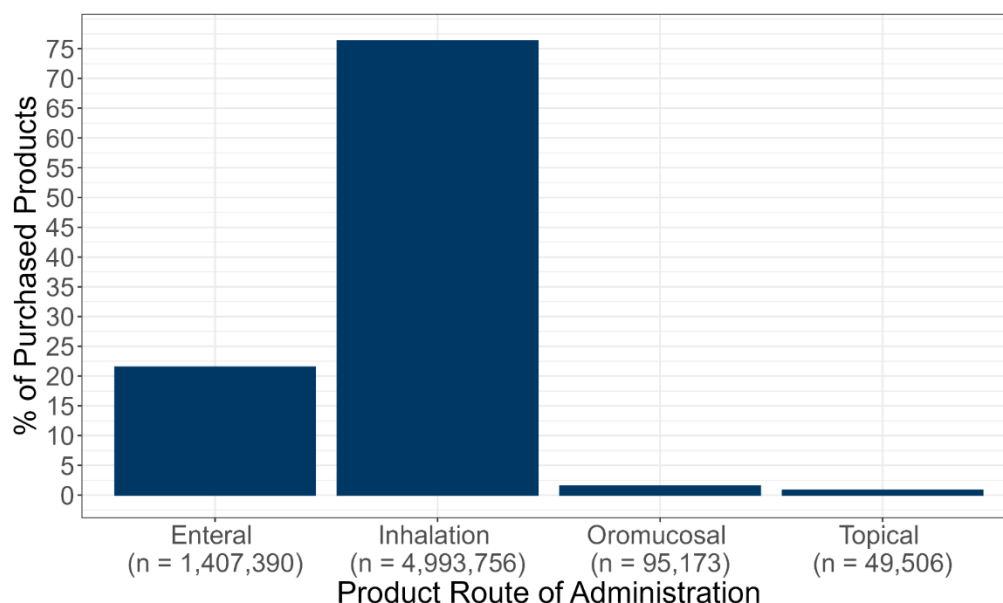
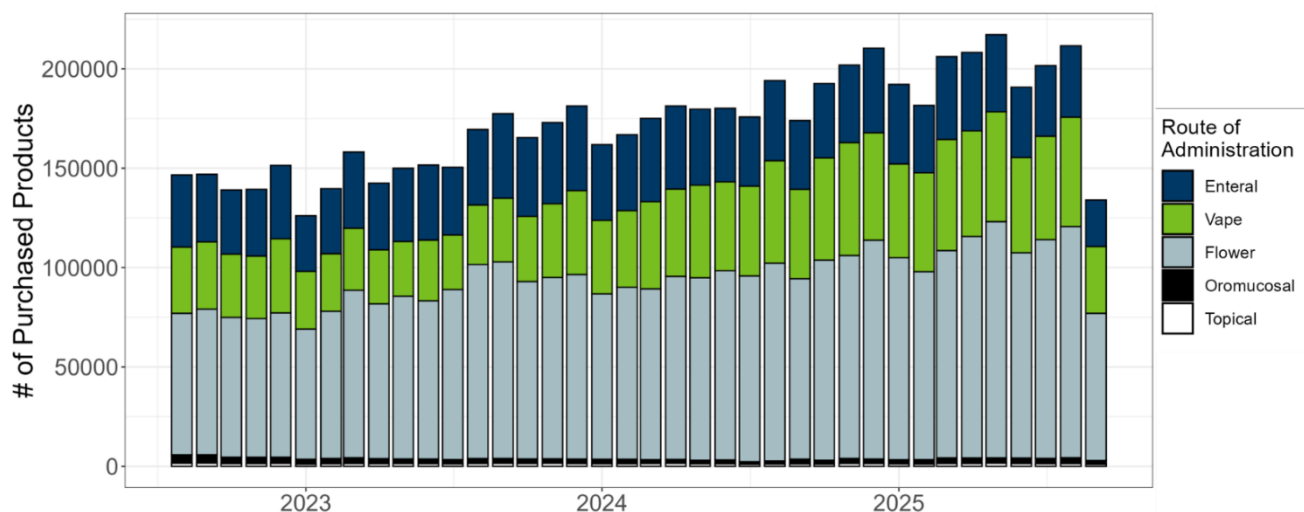


Figure 7. Number of medical cannabis products purchased per month by route of administration



Among patient age groups, inhalation products are the most common route of administration in all age groups except for patients under 21 years old and over 80 years old. In those age groups, enteral products are the most common (Figure 8, Table A3). Among patients under 18 years old, enteral products were the most commonly purchased, while among patients aged 18-20, inhalation products were the most commonly purchased (Figure 9). In the medical program, patients under 18 years old must have a parent or legal guardian purchase medical cannabis on their behalf. Additionally, flower products cannot be sold if the product is intended for a patient under the age of 21.

Figure 8. Product route of administration by patient age

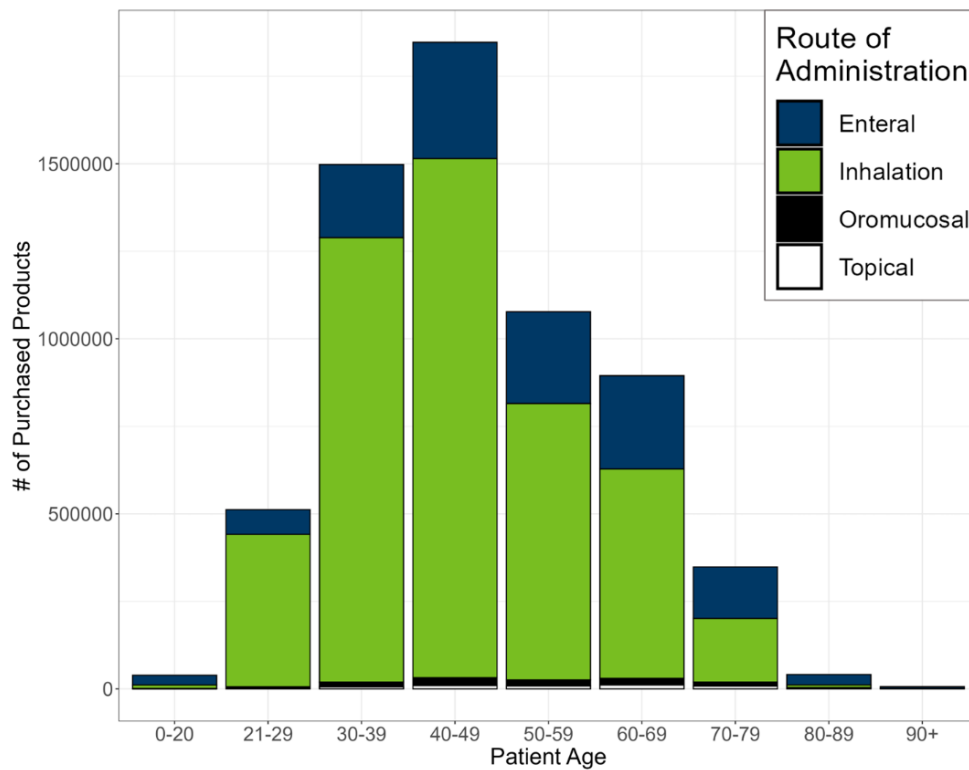
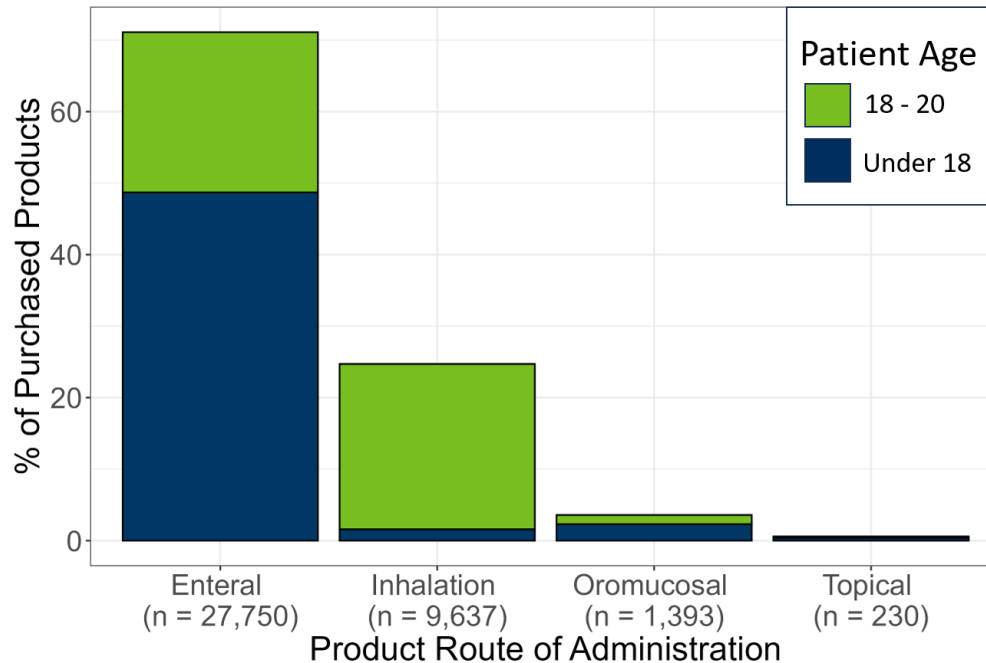


Figure 9. Product route of administration for patients under 21 years old



THC:CBD concentration

In all routes of administration, very high THC:CBD ratio products were the most commonly purchased products (Figure 10, Table A4). For flower products, high THC low CBD products were the most commonly purchased, followed by high THC medium CBD products (Figure 11, Table A5).

Figure 10. THC:CBD ratio for vape, enteral, oromucosal, and topical products.

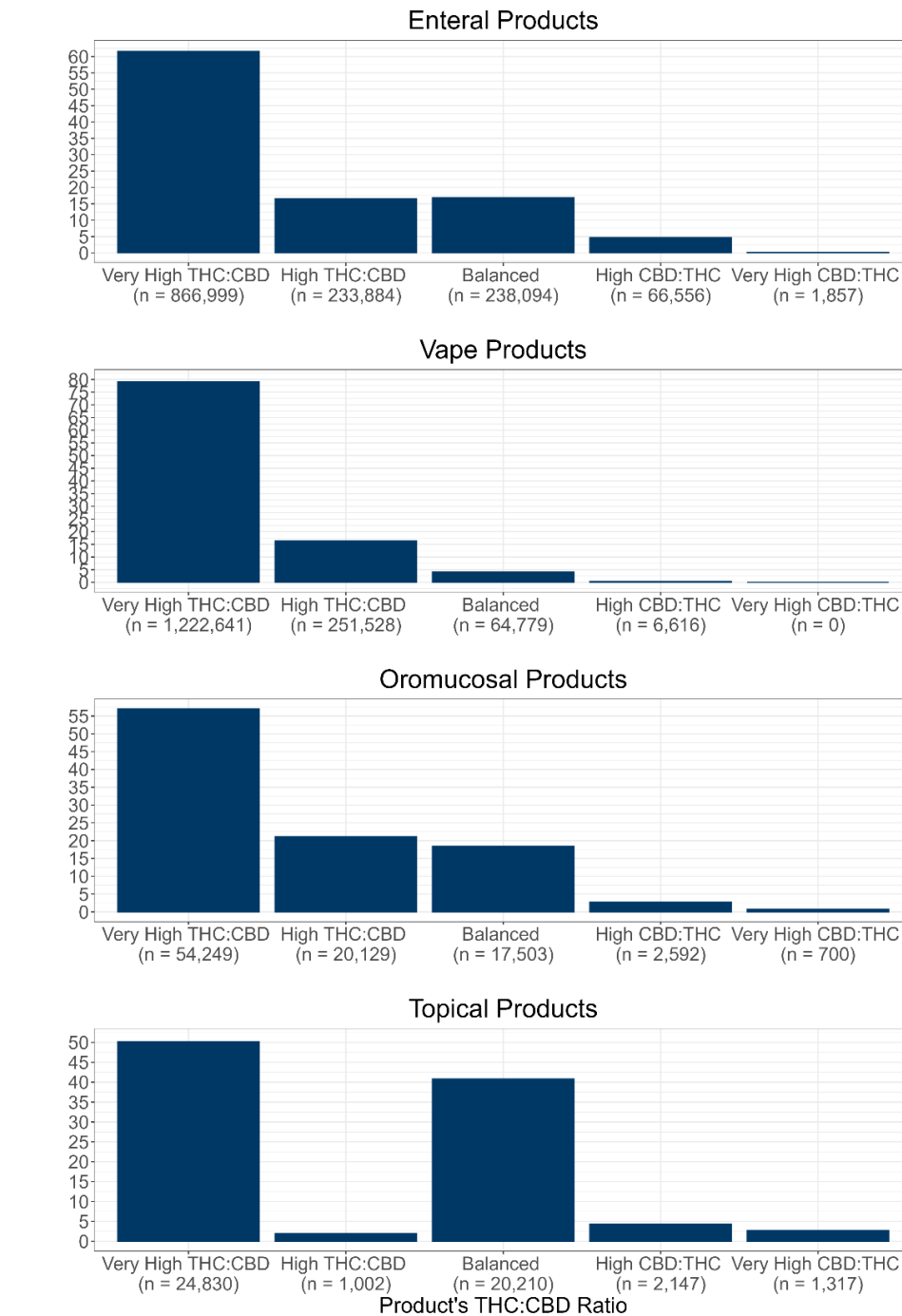
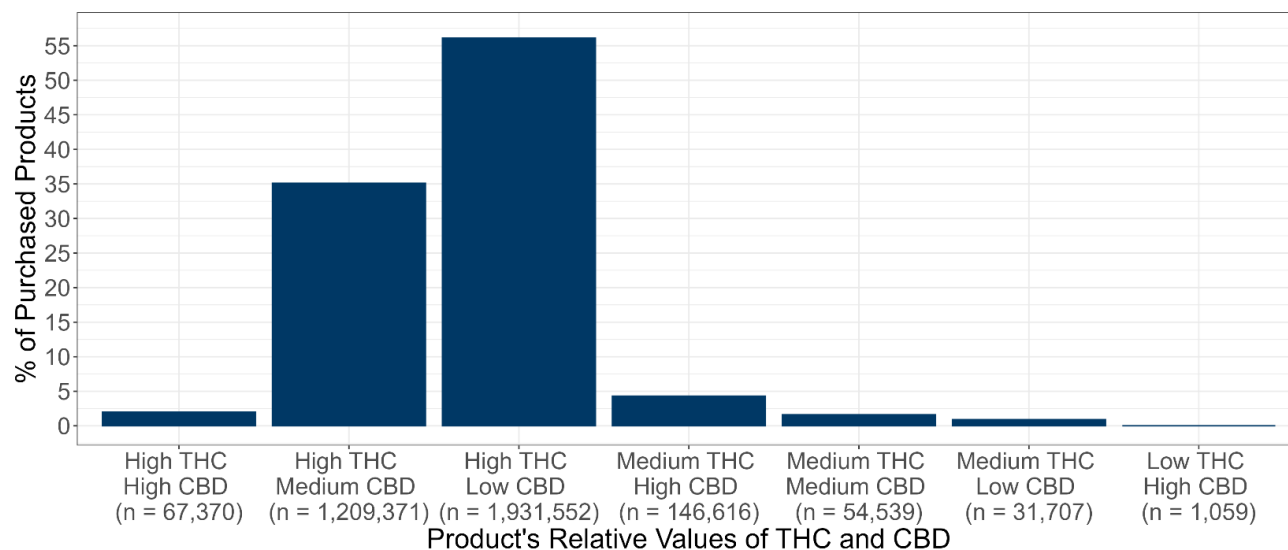


Figure 11. Flower Inhalation products purchased by product's relative THC to CBD ratio

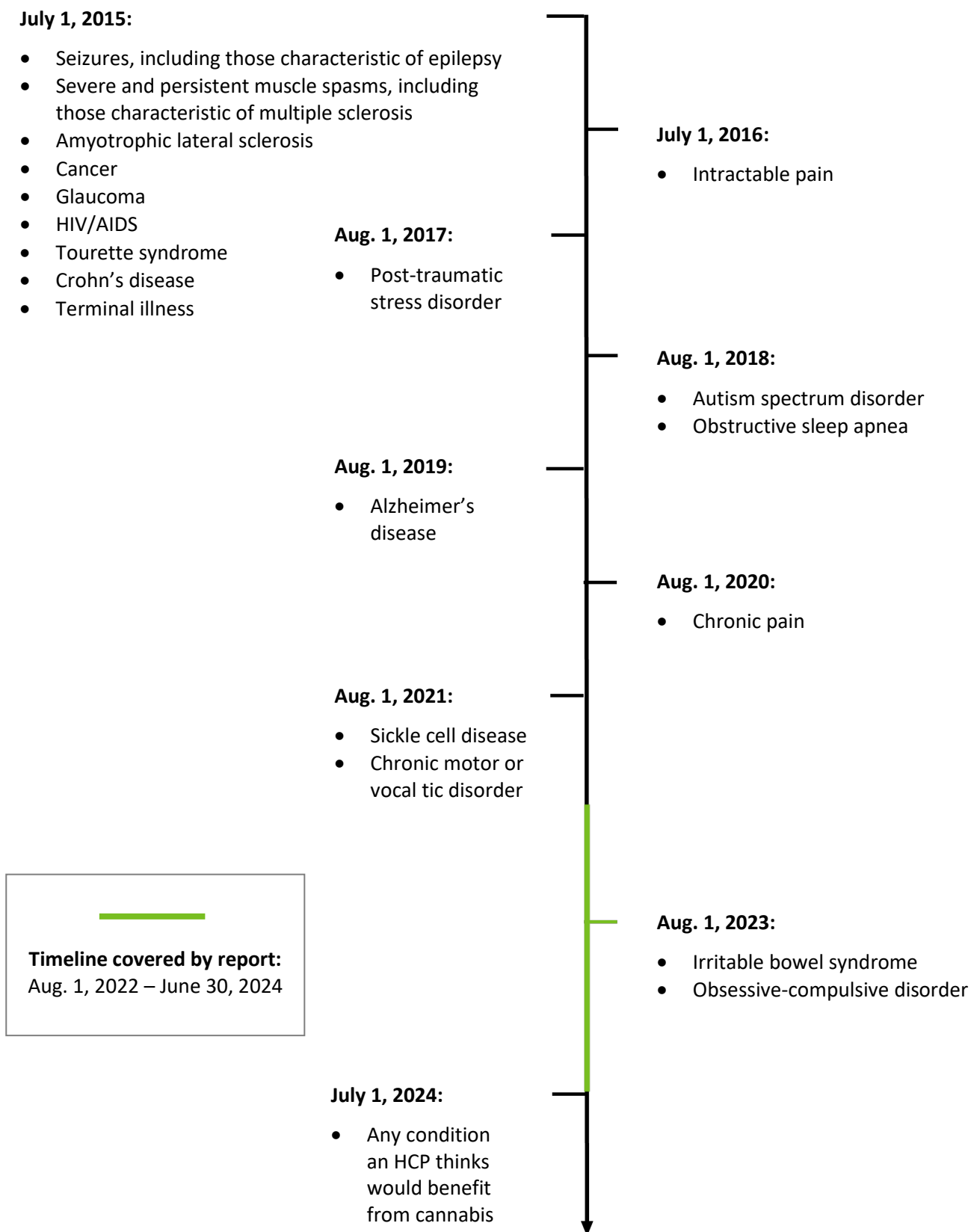


Qualifying condition

To enroll in Minnesota's medical cannabis program, a patient must be diagnosed with at least one qualifying condition by a health care practitioner (HCP). The eligible qualifying conditions have evolved over time due to legislative changes (Figure 12), and as of July 1, 2024, an HCP may qualify a patient for any condition they believe would benefit from medical cannabis. Before July 1, 2024, eligible qualifying conditions included seizures, severe and persistent muscle spasms, amyotrophic lateral sclerosis, cancer, glaucoma, HIV/AIDS, Tourette syndrome, Crohn's disease, terminal illness, intractable pain, post-traumatic stress disorder, autism spectrum disorder, obstructive sleep apnea, Alzheimer's disease, chronic pain, sickle cell disease, chronic motor or vocal tic disorder, irritable bowel syndrome, and obsessive-compulsive disorder.

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Figure 12. Timeline of qualifying conditions in Minnesota’s medical cannabis program



Data below are for patients qualified for only one qualifying condition. For the purposes of this report, cancer and terminal illness related conditions have been combined to one condition. Additionally, as intractable pain is a sub-classification of chronic pain, these conditions have been combined as pain-qualifying conditions. These data represent 85% of all patients and 87% of all purchasing transactions in this time period. Data below are from purchasing transactions between Aug. 1, 2022, and June 30, 2024, to capture which products are purchased by patients with different qualifying conditions. Data were captured pursuant to changes in medical program qualifications on July 1, 2024. Pain conditions are the most common among patients in Minnesota’s medical cannabis program, followed by post-traumatic stress disorder (PTSD) (Table 1). Patients enrolled for a pain condition accounted for over half of all medical cannabis purchasing transactions (Table 1).

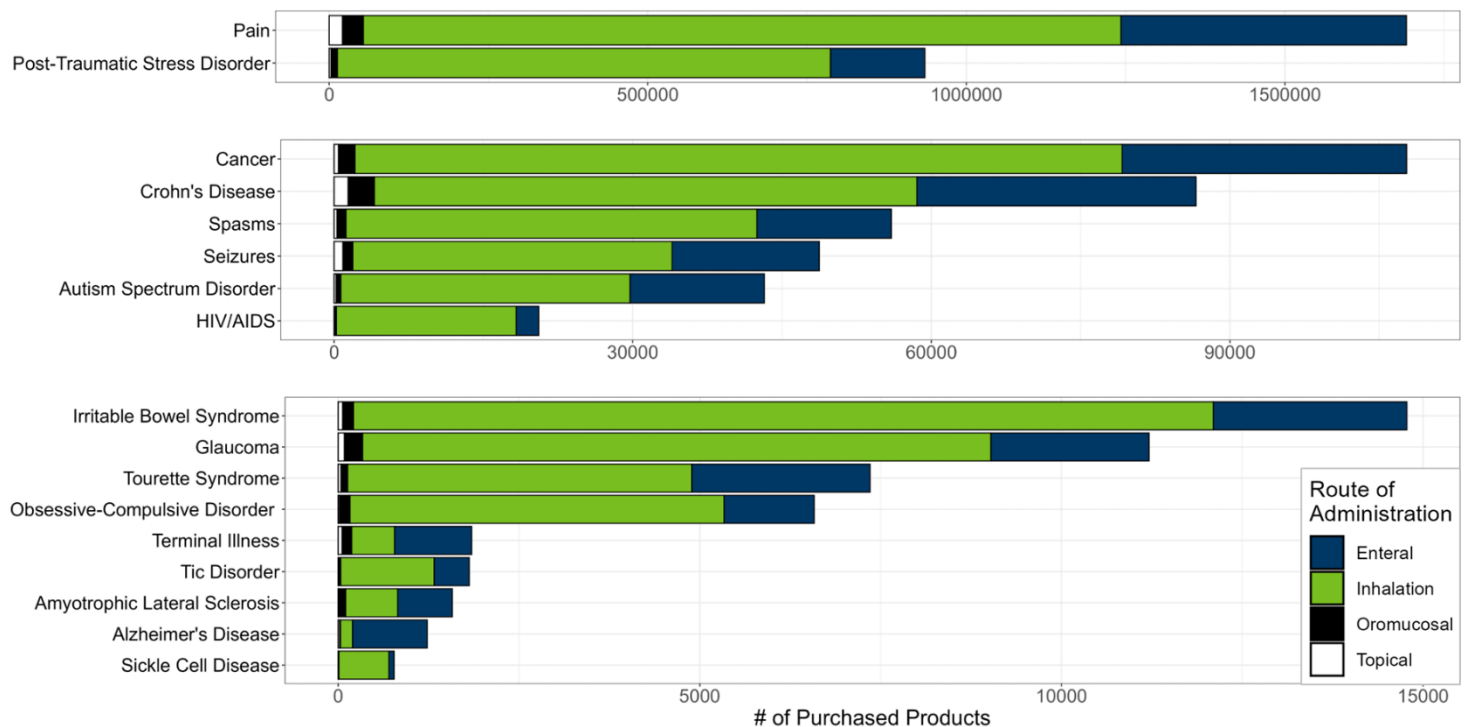
When looking at the product route of administration most commonly purchased by qualifying condition, a majority of purchases among each qualifying condition are inhalation products, followed by enteral products. Patients qualified for a terminal illness or Alzheimer’s disease primarily purchase enteral products (Figure 14, Table A6).

Table 1. Transaction data by qualifying condition

Qualifying condition	Patients: n (%)	Transactions: n (%)
Pain	27,356 (54.1)	465,302 (51.9)
Post-traumatic stress disorder	15,124 (29.9)	306,317 (34.2)
Obstructive sleep apnea	1,572 (3.1)	29,729 (3.3)
Cancer	2,398 (4.7)	21,752 (2.4)
Crohn's disease	788 (1.6)	15,638 (1.7)
Severe and persistent muscle spasms	754 (1.5)	12,672 (1.4)
Autism spectrum disorder	801 (1.6)	12,286 (1.4)
Seizures (including epilepsy)	638 (1.3)	12,216 (1.4)
HIV/AIDS	246 (0.5)	7,114 (0.8)
Irritable bowel syndrome	272 (0.5)	4,053 (0.5)
Glaucoma	163 (0.3)	3,475 (0.4)
Obsessive-compulsive disorder	165 (0.3)	2,006 (0.2)

Qualifying condition	Patients: n (%)	Transactions: n (%)
Chronic motor or vocal tic disorder	44 (0.1)	532 (0.1)
Terminal illness	74 (0.1)	467 (0.1)
Amyotrophic lateral sclerosis	46 (0.1)	337 (0)
Sickle cell disease	10 (0)	310 (0)
Alzheimer's disease	47 (0.1)	300 (0)
Tourette syndrome	107 (0.2)	207 (0)

Figure 13. Products purchased by condition and route of administration



Appendix: Additional tables

Table A1. Number of medical cannabis products purchased and number of patients active in the Medical Cannabis Registry per month.

Date	Number of products sold	Number of patients active
August 2022	146,624	37,230
September 2022	146,953	38,028
October 2022	139,036	38,682
November 2022	139,344	39,099
December 2022	151,466	39,577
January 2023	126,109	40,030
February 2023	139,722	40,392
March 2023	158,131	40,345
April 2023	142,470	39,956
May 2023	149,994	39,816
June 2023	151,614	39,008
July 2023	150,444	39,993
August 2023	169,509	40,060
September 2023	177,461	41,140
October 2023	165,429	42,201
November 2023	172,970	43,025
December 2023	181,326	43,567
January 2024	161,843	44,360
February 2024	166,839	45,309

Date	Number of products sold	Number of patients active
March 2024	175,102	45,802
April 2024	181,330	46,519
May 2024	179,711	47,314
June 2024	180,166	48,406
July 2024	175,796	47,616
August 2024	194,107	46,505
September 2024	173,988	46,797
October 2024	192,618	48,447
November 2024	201,900	49,988
December 2024	210,397	50,249
January 2025	192,176	50,936
February 2025	181,637	51,446
March 2025	206,136	52,012
April 2025	208,252	52,790
May 2025	217,233	53,340
June 2025	190,776	54,092
July 2025	201,591	56,585
August 2025	211,625	58,436
September 2025	134,005	60,647

Table A2. Number of products purchased by route of administration by month and year.

Month/Year	Enteral	Inhalation – flower products	Inhalation - vaporization products	Oromucosal	Topical
August 2022	36,316	71,177	33,321	4,257	1,553
September 2022	34,044	73,189	33,846	4,250	1,624
October 2022	32,284	70,359	31,803	3,262	1,328
November 2022	33,569	69,804	31,430	3,197	1,344
December 2022	36,996	72,606	37,277	3,125	1,462
January 2023	28,050	65,537	29,031	2,464	1,027
February 2023	32,771	74,038	28,957	2,709	1,247
March 2023	38,358	84,272	31,158	2,964	1,379
April 2023	33,585	77,915	27,124	2,558	1,288
May 2023	36,889	81,902	27,493	2,368	1,342
June 2023	37,824	79,586	30,554	2,358	1,292
July 2023	34,055	85,612	27,420	2,221	1,136
August 2023	38,058	97,626	29,931	2,511	1,383
September 2023	42,585	98,936	31,998	2,442	1,500
October 2023	39,652	89,253	32,808	2,324	1,392
November 2023	40,865	91,259	37,100	2,200	1,546
December 2023	42,638	92,880	42,202	2,271	1,335
January 2024	38,099	83,266	36,984	2,264	1,230
February 2023	38,203	86,564	38,574	2,251	1,247
March 2024	41,996	86,017	43,796	1,913	1,380
April 2024	41,869	92,138	43,894	1,932	1,497

Month/Year	Enteral	Inhalation – flower products	Inhalation - vaporization products	Oromucosal	Topical
May 2024	38,264	91,807	46,579	1,842	1,219
June 2024	37,047	95,271	44,682	1,959	1,207
July 2024	34,841	93,479	45,176	1,320	980
August 2024	40,379	99,518	51,497	1,637	1,076
September 2024	34,676	90,805	44,931	2,430	1,143
October 2024	37,408	100,693	51,451	2,033	1,031

Table A3. Number of products purchased by each age category by route of administration.

Age category	Enteral	Inhalation	Oromucosal	Topical
0-20	27,750	9,637	1,393	230
21-29	70,600	435,278	3,742	2,332
30-39	208,976	1,269,437	13,253	6,068
40-49	332,136	1,482,561	22,805	9,293
50-59	262,270	789,188	17,624	8,231
60-69	266,593	598,082	19,007	11,050
70-79	147,239	181,678	11,559	7,891
80-89	29,770	7,539	1,585	2,235
90+	5,347	133	284	710

Table A4. Number of products sold by route of administration and THC:CBD ratio

THC: CBD ratio	Vape products n (%)	Enteral products n (%)	Orocmucosal products n (%)	Topical products n (%)
Very High THC:CBD	1,222,641 (79.1)	866,999 (61.6)	54,249 (57)	24,830 (50.2)
High THC:CBD	251,528 (16.3)	233,884 (16.6)	20,129 (21.1)	1,002 (2)
Balanced	64,779 (4.2)	238,094 (16.9)	17,503 (18.4)	20,210 (40.8)
High CBD:THC	6,616 (0.4)	66,556 (4.7)	2,592 (2.7)	2,147 (4.3)
Very High CBD:THC	0 (0)	1,857 (0.1)	700 (0.7)	1,317 (2.7)

Table A5. Number of cannabis flower products sold by relative values of THC and CBD.

Relative values of THC and CBD	n (%)
High THC, high CBD	67,370 (2.0)
High THC, medium CBD	1,209,371 (35.1)
High THC, low CBD	1,931,552 (56.1)
Medium THC, high CBD	146,616 (4.3)
Medium THC, medium CBD	54,539 (1.6)
Medium THC, low CBD	31,707 (0.9)
Low THC, high CBD	1,059 (0.0)

Table A6. Number of products purchased by qualifying condition and route of administration.

Qualifying condition	Enteral	Inhalation	Oromucosal	Topical
Amyotrophic lateral sclerosis	755	718	92	13
Alzheimer's disease	1,032	169	9	22
Autism spectrum disorder	18,969	19,304	728	196
Cancer	28,040	54,492	2,665	1,391
Crohn's disease	13,503	41,292	897	290
Glaucoma	2,186	8,688	251	86
HIV/AIDS	2,274	18,054	194	40
Irritable bowel syndrome	2,676	11,889	150	61
Obsessive-compulsive disorder	1,247	5,172	146	18
Obstructive sleep apnea	28,588	77,082	1,652	435
Post-traumatic stress disorder	148,145	773,924	9,960	2,881
Pain	448,021	1,189,176	32,923	20,651
Seizures	13,500	29,046	478	202
Sickle cell disease	72	692	5	4
Spasms	14,791	32,063	1,018	877
Terminal illness	1,068	593	133	54
Tic disorder	487	1,292	27	8
Tourette syndrome	2,466	4,759	93	37