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DEPARTMENT OF HEALTH

Medical Cannabis Program Update

JANUARY 2020

Minnesota's medical cannabis program began distributing medical cannabis to registered patients on July 1, 2015. This update reports information collected from July 1, 2015 through December 31, 2019. The data for this update, unless otherwise noted, come from the medical cannabis patient registry system, a secure, web-based application system. This document is updated quarterly.

Cannabis Manufacturers

The Minnesota Department of Health (MDH) registered two medical cannabis manufacturers on December 1, 2014. They are responsible for the cultivation, production, and distribution of medical cannabis in the state. The manufacturers are Minnesota Medical Solutions, LLC and LeafLine Labs, LLC.

Minnesota Medical Solutions operates distribution facilities, or Cannabis Patient Centers (CPCs), in Minneapolis, Rochester, Moorhead, and Bloomington.

LeafLine Labs operates CPCs in Eagan, St. Cloud, Hibbing, and St. Paul.

Under legislation effective on July 1, 2019, each manufacturer will be required to open four more CPCs. The locations proposed by the manufacturers are Willmar, Mankato, Golden Valley, Rogers, Woodbury, Blaine, Duluth, and Burnsville.

Figure 1 displays the total number of patient visits to a CPC that resulted in medical cannabis purchases between July 1, 2015 and December 31, 2019. Each visit may have resulted in the purchase of multiple products and variable quantities; additionally, patients may have made several purchase visits during this time period. Only the number of total CPC visits is reflected in this figure.



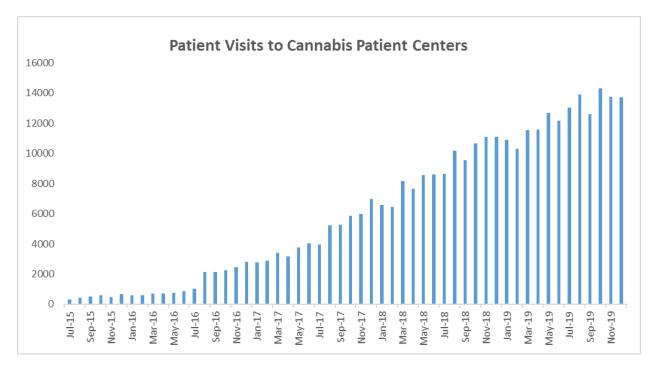


Figure 1. Total number of patient visits to a Cannabis Patient Center that resulted in purchase of medical cannabis products, by month.

Patients

Qualifying patients must be enrolled in the medical cannabis patient registry to be eligible to legally purchase and possess medical cannabis. As part of the application process, a patient's qualifying medical condition must be certified by a health care practitioner; this qualifying medical condition and the patient must be re-evaluated and re-certified by a health care practitioner every year.

Figure 2 displays the weekly number of patients enrolled and in active status in the registry. As of December 31, 2019, there were 18,249 patients actively enrolled in the patient registry, an increase of 27% (or 3,851) above the 14,398 who were enrolled on December 27, 2018.

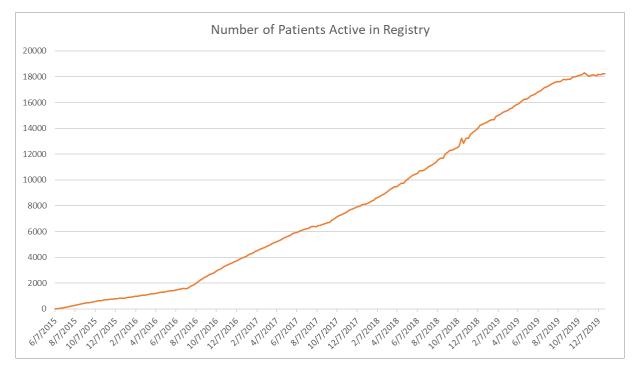


Figure 2. Weekly number of patients enrolled and in active status in registry.

Patients must pay an enrollment fee before they are eligible to legally purchase and possess medical cannabis. Minnesota Statutes, Section 152.35 sets the annual patient enrollment fee at \$200; patients who receive medical assistance, such as Minnesota Care (MN Care), Social Security Disability (SSD), Supplemental Security Income (SSI), Medicaid/Medical Assistance (MA) and CHAMPVA, qualify for a reduced fee of \$50. Figure 3 shows that 52 percent of patients registered as of December 31, 2019 qualified for the reduced enrollment fee.

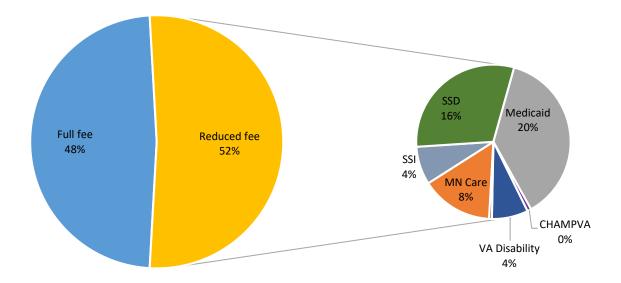


Figure 3. Breakdown of active patients by fee type (reduced vs. full fee) and types of government assistance for reduced fees, as of December 31, 2019.

The medical conditions that qualify a patient for the medical cannabis program are:

- Cancer or its treatment (must be accompanied by severe or chronic pain, nausea, or severe wasting);
- Glaucoma;
- HIV/AIDS;
- Tourette Syndrome;
- Amyotrophic Lateral Sclerosis (ALS or Lou Gehrig's Disease);
- Seizures, including those characteristic of epilepsy;
- Severe and persistent muscle spasms, including those characteristic of multiple sclerosis;
- Terminal Illness with life-expectancy of less than 1 year (must be accompanied by severe or chronic pain, nausea, or severe wasting); and,
- Crohn's Disease was extended to Inflammatory Bowel Disease (including Crohn's Disease) effective July 1, 2016.

The Commissioner of Health has added the following qualifying medical conditions:

- Intractable Pain, effective August 1, 2016;
- Post-Traumatic Stress Disorder (PTSD), effective August 1, 2017;
- Autism Spectrum Disorder, effective August 1, 2018; and
- Obstructive Sleep Apnea, effective August 1, 2018.

• Alzheimer's Disease as a qualifying condition, effective August 1, 2019.

The Commissioner has also conditionally added Chronic Pain and Age-Related Macular Degeneration as qualifying conditions, to be effective August 1, 2020.

Table 1 shows the number of active patients in the patient registry who have been certified as having that qualifying medical condition. As of December 31, 2019, the three most frequently certified qualifying medical conditions are (1) intractable pain, (2) PTSD, and (3) severe and persistent muscle spasms, including those characteristic of multiple sclerosis.

| Qualifying Condition | Patients Certified: N (%) |
|--|---------------------------|
| Glaucoma | 122 (1%) |
| HIV/AIDS | 108 (1%) |
| Tourette Syndrome | 112 (1%) |
| ALS | 35 (<1%) |
| Seizures | 626 (3%) |
| Severe and Persistent Muscle Spasms | 2,192 (12%) |
| Inflammatory Bowel Disease, Including Crohn's Disease | 547 (3%) |
| Cancer | 1,346 (7%) |
| Terminal Illness | 128 (1%) |
| Intractable Pain | 11,807 (65%) |
| Post-Traumatic Stress Disorder | 3,640 (20%) |
| Autism Spectrum Disorder | 517 (3%) |
| Obstructive Sleep Apnea | 892 (5%) |
| Alzheimer's Disease | 30 (<1%) |
| Total | 18,249 |

Table 1: Count (%) of Active Patients by Condition* as of December 31, 2019

*Patients certified total more than 100% because 16.2% of the 18,249 patients are currently certified for more than one condition; this table counts each certified condition.

Figure 4 displays the number of active patients by age and gender. The average age of registered patients is 48.7 years; however, the average age varies by qualifying medical condition.

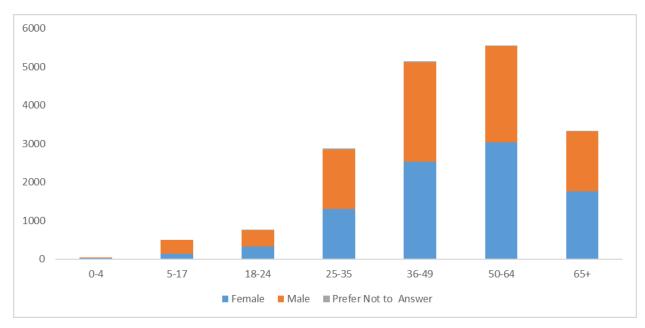


Figure 4. Breakdown of active patients by age and gender, as of December 31, 2019.

Table 2 demonstrates the breakdown of active, condition-specific patient counts by age. Patients certified as having Autism Spectrum Disorder have the lowest average age of 18.0 years; patients with Alzheimer's disease have the highest average age of 74.3 years.

| Table 2: Breakdown of Active Patients by Age Group and Qualifying Medical | |
|---|--|
| Condition, as of December 31, 2019 | |

| Age (y) | 0-4 | 5-17 | 18-24 | 25-35 | 36-49 | 50-64 | 65+ | Mean Age (SD) |
|---|---------|-----------|----------|-----------|-----------|-----------|-----------|------------------|
| All Conditions | 48 | 503 | 762 | 2884 | 5148 | 5563 | 3341 | 48.7 (16.7) |
| Glaucoma | - | 1 (1%) | 0 (0%) | 8 (7%) | 17 (14%) | 43 (35%) | 53 (36%) | 59.4 (14.1) |
| HIV/AIDS | - | - | 4 (4%) | 22 (20%) | 38 (35%) | 40 (37%) | 4 (4%) | 44.9 (11.6) |
| Tourette Syndrome | - | 28 (25%) | 23 (21%) | 26 (23%) | 22 (20%) | 7 (6%) | 6 (5%) | 29.6 (16.3) |
| ALS | - | - | - | 1 (3%) | 4 (11%) | 17 (49%) | 13 (37%) | 60.1 (10.9) |
| Seizures | 22 (4%) | 112 (18%) | 87 (14%) | 161 (26%) | 148 (24%) | 68 (11%) | 28 (5%) | 32.0 (16.8) |
| Muscle Spasms | 1 (<1%) | 15 (1%) | 81 (4%) | 376 (17%) | 703 (32%) | 728 (33%) | 288 (13%) | 47.9 (14.5) |
| Inflammatory Bowel Disease, Including Crohn's Disease | - | 4 (1%) | 26 (5%) | 130 (24%) | 204 (37%) | 141 (26%) | 42 (8%) | 43.9 (13.7) |

| Age (y) | 0-4 | 5-17 | 18-24 | 25-35 | 36-49 | 50-64 | 65+ | Mean Age (SD) |
|-----------------------------|---------|-----------|----------|------------|------------|------------|------------|------------------|
| Cancer | 9 (1%) | 18 (1%) | 20 (2%) | 69 (5%) | 235 (18%) | 515 (38%) | 511 (36%) | 57.5 (15.5) |
| Terminal Illness | 2 (2%) | 4 (3%) | 4 (3%) | 4 (3%) | 16 (13%) | 42 (33%) | 56 (44%) | 59.0 (19.2) |
| Intractable Pain | 2 (<1%) | 34 (<1%) | 295 (3%) | 1476 (13%) | 3361 (29%) | 4119 (35%) | 2520 (21%) | 52.0 (15.1) |
| PTSD | 1 (<1%) | 48 (1%) | 298 (8%) | 1184 (33%) | 1270 (35%) | 636 (18%) | 204 (6%) | 40.0 (13.2) |
| Autism Spectrum Disorder | 15 (3%) | 300 (58%) | 91 (18%) | 65 (13%) | 38 (7%) | 5 (1%) | 3 (1%) | 18.0 (11.1) |
| Obstructive Sleep Apnea | - | 1 (<1%) | 7 (1%) | 87 (10%) | 322 (36%) | 339 (38%) | 136 (15%) | 50.9 (12.2) |
| Alzheimer's Disease | - | - | - | - | - | 4 (13%) | 26 (87%) | 74.3 (8.9) |

Table 3 indicates the majority of enrolled patients come from or near the Minneapolis-St. Paul metropolitan area. Only fourteen percent of enrolled patients come from the northern tier (defined as the Duluth, Brainerd, Bemidji, Detroit Lakes, and East Grand Forks zip code regions listed in Table 4). Eleven percent come from Southern Minnesota (defined as the Rochester, Mankato, Willmar postal codes). Seventy percent of enrolled patients come from the Minneapolis-St. Paul metropolitan area. The remaining six percent come from the St. Cloud region.

Table 3. Approved and active patients, by Zip code region as of December 31,2019

| Region | ZIP Codes | Active Patients |
|---------------|-------------|-----------------|
| St Paul | 55000-55199 | 5316 |
| Minneapolis | 55300-55599 | 7293 |
| Duluth | 55600-55899 | 1076 |
| Rochester | 55900-55999 | 861 |
| Mankato | 56000-56199 | 641 |
| Willmar | 56200-56299 | 518 |
| St Cloud | 56300-56399 | 1101 |
| Brainerd | 56400-56499 | 586 |
| Detroit Lakes | 56500-56599 | 453 |

| Region | ZIP Codes | Active Patients |
|---------------|-------------|-----------------|
| Bemidji | 56600-56699 | 259 |
| E Grand Forks | 56700-56799 | 139 |

Caregivers

Patients who require extra help can use their registry account to invite caregivers to assist them in picking up medical cannabis from a cannabis patient center or in administering the medical cannabis. There are two different groups of caregivers in the Minnesota medical cannabis program: designated caregivers and parents, legal guardians, or spouses acting as caregivers. All caregivers must be enrolled in the patient registry system. A patient's parent, legal guardian, or spouse may act as caregiver and be entered in the registry without having to qualify as a designated caregiver. A patient may have both registered designated caregivers and registered parents, legal guardians, or spouse acting as caregivers.

The law permits a patient to have a registered designated caregiver only if the patient's health care practitioner certifies that the patient requires assistance in administering medical cannabis or obtaining medical cannabis from a CPC. Registered designated caregivers must pass a criminal background check.

Table 4 displays the number of patients with registered designated caregivers or registered parents/legal guardians/spouses, by qualifying medical condition, as of December 31, 2019. Prior to July 1, 2019, a patient's spouse was required to qualify as a designated caregiver in order to register in the program. Under legislation which became effective July 1, 2019, a patient's spouse is no longer required to register as a designated caregiver. Therefore, the majority of caregivers who are spouses of patients are registered as designated caregivers rather than parents/legal guardians/spouses and are represented in the middle column of Table 4.

| Qualifying Condition | Total Patients | Patient with Registered Caregivers: N (%) | Patients with Registered PLGS: N (%) | Patients with Caregiver and/or PLGS: N (%) |
|----------------------|----------------|--|--|--|
| Glaucoma | 122 | 13 (10%) | 3 (2%) | 16 (13%) |
| HIV/AIDS | 108 | 3 (3%) | - | 3 (3%) |
| Tourette Syndrome | 112 | 4 (4%) | 52 (46%) | 54 (48%) |
| ALS | 35 | 13 (37%) | 7 (20%) | 19 (54%) |
| Seizures | 626 | 44 (7%) | 270 (43%) | 299 (48%) |

Table 4: Active Designated Caregivers and/or Registered Parents/LegalGuardians/Spouses (PLGS) by Condition* as of December 31, 2019

| Qualifying Condition | Total Patients | Patient with Registered Caregivers: N (%) | Patients with Registered PLGS: N (%) | Patients with Caregiver and/or PLGS: N (%) |
|---|----------------|--|--|--|
| Severe and Persistent Muscle Spasms | 2192 | 216 (10%) | 122 (6%) | 328 (15%) |
| Inflammatory Bowel Disease, Including Crohn's Disease | 547 | 26 (5%) | 26 (5%) | 55 (10%) |
| Cancer | 1346 | 226 (17%) | 159 (12%) | 379 (28%) |
| Terminal Illness | 128 | 32 (25%) | 18 (14%) | 49 (38%) |
| Intractable Pain | 11807 | 764 (7%) | 48 (4%) | 1231 (10%) |
| Post-Traumatic Stress Disorder | 3640 | 99 (3%) | 166 (5%) | 257 (7%) |
| Autism Spectrum Disorder | 517 | 22 (4%) | 435 (84%) | 439 (85%) |
| Obstructive Sleep Apnea | 892 | 31 (3%) | 23 (3%) | 54 (6%) |
| Alzheimer's Disease | 30 | 10 (33%) | 13 (43%) | 22 (73%) |
| Total | 17,961 | 1347 (8%) | 1343 (8%) | 2631 (15%) |

*A designated caregiver is limited to caring for one patient at a time, unless the patients live at the same address.

Health Care Practitioners

Health care practitioners who can certify a patient's qualifying medical condition are Minnesota licensed physicians, physician assistants, and advanced practice registered nurses (APRNs). The health care practitioner must be enrolled in the medical cannabis registry before certifying a patient's qualifying medical condition.

As can be seen in Figure 5, the number of health care practitioners registering with the program continues to increase.

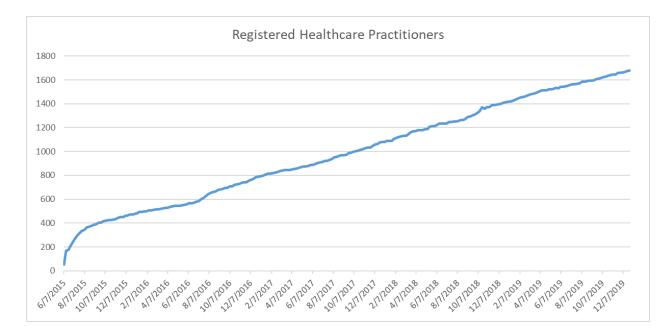


Figure 5. Count of registered health care practitioners actively in the patient registry since the program start.

Table 5 shows that as of December 31, 2019, there were 1,681 health care practitioners approved in the registry system. Of the 1,681 registered practitioners, 1226 are physicians, 129 are physician assistants, and 326 are APRNs. One year ago, there were 1,415 registered health care practitioners, 1041 of whom were physicians (75%), 104 of whom were physician assistants (7%), and 250 of whom were APRNs (18%).

Table 5: Breakdown of Registered Health Care Practitioners by Type, as ofDecember 31, 2019

| Healthcare Practitioner Type | N (%) |
|------------------------------|------------|
| Physician | 1226 (73%) |
| Physician Assistant | 129 (8%) |
| Advanced Practice RN | 326 (20%) |
| Total | 1,681 |

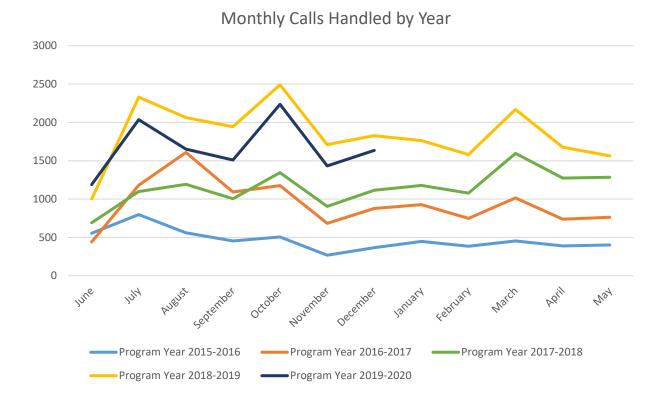


Figure 6. Number of monthly calls handled by OMC staff since program start.

Activity in the program markedly increased beginning July 1, 2016, when Intractable Pain became a qualifying medical condition. Phone calls received by OMC increased beginning in June 2016. Eleven of the thirteen highest call-volume months occurred in fiscal year 2019 (ending June 30, 2019).

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January 13, 2020

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