



## Minnesota Board of Pharmacy

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## 2016 Annual Report

## Acknowledgements

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## Executive Summary

2016 marked the 7th year that the Minnesota Prescription Monitoring Program (PMP) has been in operation. In 2009, MN Stats. §152.126 required the Board of Pharmacy (Board) to develop and maintain a database of controlled substance prescriptions for the purpose of promoting public health and welfare by detecting abuse, misuse, and diversion of controlled substance prescriptions. The goal of the PMP is to assist in improving patient care and reducing the misuse of controlled substances.

Additionally, Minnesota law mandated the Board to appoint an advisory task force, made up of representatives from health related licensing boards, other state agencies, professional associations and members of the public. The Task Force advises the Board on the development and operation of the PMP including, but not limited to:

- (1) technical standards for electronic prescription drug reporting;
- (2) proper analysis and interpretation of prescription monitoring data;
- (3) an evaluation process for the program; and
- (4) criteria for the unsolicited provision of prescription monitoring data by the board to prescribers and dispensers.

In mid-2014, a change in MN Stats. §152.126 became effective which allowed the PMP to participate in the interstate exchange of data with prescribers and pharmacists in other states. Numerous states were connected to during 2016 using the PMP InterConnect solution provided by the National Association of Boards of Pharmacy.

One report, mandated by the legislature, was produced in 2016 and filed with the MN Legislative Reference Library. The report, “Impact of the Prescription Monitoring Program on Doctor Shopping”<sup>1</sup> provides an update to the Legislature regarding the perceived impact the Minnesota PMP has had on doctor shopping. Using survey results regarding use of the PMP and actions taken because of notification via Controlled Substance Insight Alerts. (CSIA), trends in CSIA, and other data, this report reflects the various changes in prescribing and dispensing behaviors, as well as patient behaviors.

As the number of approved system account holders continues to grow, so too do the number of queries of patient controlled substance prescription histories. Annual survey results continue to show prescribers and pharmacists are changing their prescribing and dispensing habits because of checking the PMP database.

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<sup>1</sup> <https://www.leg.state.mn.us/docs/2016/mandated/161206.pdf>

## Operational Findings

- Over 7.8 million prescriptions, for federally scheduled II-V controlled substances, were reported as dispensed to the PMP database in 2016. That number reflects a 4.3% decrease from 2015.
- The top 1% of prescribers contributed to 21.3% of all schedule II-V controlled substances reported to the MN PMP.
- Of the top 100 prescribers of controlled substance, 92% have requested and obtained access to the MN PMP. Up from 89% in 2015.
- Between January 2016 and December 2016, there was a steady increase in new system account applications received, with an average of 21.5 applications per day, up from 17.7 in 2015.
- The overall number of approved accounts in 2016 reached 26,869, an increase of roughly 7,800 of which almost 1,200 were for delegate accounts for health care providers and pharmacy staff.
- With roughly a 50% increase in the number of delegate accounts, there was also a 29% increase in their system utilization.
- At the end of 2016, there were 21,850 MN licensed prescribers and pharmacists approved for system accounts, an increase of approximately 32% from 2015.
- The total number of patient queries conducted by permissible data users, including health care providers and pharmacists, increased from 176,645 in 2011 to 1,168,186 in 2016.
- In 2016, the average number of patient queries conducted annually by health care providers and pharmacists showed an increase for most provider groups as compared to 2015.
- In 2016, patient-requested reports rose to 364, a 17% increase from 2015. These reports were mailed directly to the patient or to a third-party provider at the patients' request.
- In 2016, the program saw a 23% increase from 2015, in the number of search warrant served by law enforcement, requesting data on an individual's prescription history, pharmacy's dispensing history, and prescriber's prescribing history
- 2016 was the second full year the MN PMP officially participated in a system that enabled sharing PMP data across state lines. MN PMP account holders conducted more than 1,066,000 queries to other participating states and more than 891,000 queries were received from other participating states.
- 2016 was the second full year the MN PMP identified multiple prescriber and dispenser episodes by patients and notified the health care providers involved with that patient's. Throughout 2016 the number of patients seeing 5 or more prescribers and 5 or more pharmacies in a 90 day period continued to decrease.

## Introduction

There is growing evidence that prescription drug monitoring programs (PDMP/PMP) play an important role in the fight against prescription drug abuse. PMPs have proven to be effective in reducing prescription drug abuse, misuse, and diversion, assisting in identifying inappropriate prescribing or dispensing, and aiding in drug investigations, amongst other efforts.

To begin addressing prescription drug abuse in the State, on May 25, 2007, the Governor signed into law MN Stats. §152.126, which required the Minnesota Board of Pharmacy (Board) to establish an electronic system for the reporting of controlled substance prescriptions that are dispensed to residents of the state. The Board subsequently implemented the Minnesota Prescription Monitoring Program (PMP). Collection of data from dispensers of controlled substances began on January 4, 2010 with authorized access to the data commencing on April 15, 2010. MN Stats. §152.126 also required the Board to appoint an advisory task force. This task force consists of at least one representative of the Department of Health and Department of Human Services; each health-related licensing board that licenses prescribers; professional associations representing the medical community, pharmacy community, nurses, and dentists; a consumer privacy or security advocate; a consumer or patient rights organization; and an association of medical examiners and coroners. The advisory task force advises the Board on the development and operation of the Minnesota Prescription Monitoring Program, including technical standards for reporting and proper analysis and interpretation of PMP data.

This annual report serves as an overview of the utilization of the database by prescribers, pharmacists and other permitted account holders, as well as controlled substance prescription dispensing activities in this state. The report intends to educate individuals regarding the controlled substance prescription dispensing landscape in Minnesota as well as PMP database usage by prescribers, pharmacists and their delegates.

Prescription data assessed in this report consists of the timeframe 1/1/16 – 12/31/16. Similar to previous annual reports, the term “controlled substance” refers to those medications that are classified federally as schedule II-V controlled substances only, unless otherwise noted. In comparing prescription counts to previous years, one must take into consideration a law change which occurred in 2014. Prior to July 1, 2014, dispensers were only required to report Minnesota schedule II-IV controlled substances to the Minnesota PMP database. Effective July 1, 2014, dispensers were required to report schedule V controlled substances as well as butalbital and tramadol. Tramadol and schedule V controlled substances were included in the 2014 Annual Report based on the timeframe of 9/1/14-12/31/14, as the system underwent an update to allow for the reporting of the additional medications. In the 2015 Annual Report, these medications, as well as schedule II-IV controlled substances were included for the full calendar year (1/1/15 – 12/31/15). In 2016, legislation passed to require dispensers to report gabapentin to the MN PMP. However, since gabapentin is not a federal controlled substance, it is not included for the purposes of this report.

Prescription data in the PMP database are as accurate as the records submitted by the dispensers. There are various required fields and validation checks in place to aid pharmacies in clean data submission. Pharmacies may edit, remove, or submit prescription records at any time to accurately reflect dispensing histories. As a result, previous and future queries of the database may result in differing output of aggregate data. An example of why a pharmacy may submit a historical upload is if the pharmacy experienced technical issues and was later made aware that data was not being reported to the PMP database. An example of prescription records being removed from the database is if prescriptions were reported to the database, yet the patient never picked the medications up from the pharmacy. In this example, the pharmacy would need to void the prescriptions in the database to reflect their actual dispensing activity.

In the interest of patient privacy, when less than ten of a particular medication was dispensed, it is reported as "<10" throughout the report.



## Operations

In 2016, the PMP completed its seventh year of operation. Currently the PMP is staffed by three full time staff; Program Manager, Program Administrator and Pharmacist Consultant. The Board receives an annual appropriation, for operation of the PMP, from the state government special revenue fund. The health-related licensing boards apportion between the Board of Medical Practice, Board of Nursing, Board of Dentistry, Board of Podiatric Medicine, and the Board of Pharmacy an amount paid through fees by each respective board. Each board's apportioned share is based on the number of prescribers and pharmacists licensed collectively by these boards. The Board is currently administering a 2011 Harold Rogers Prescription Drug Monitoring Program grant, from the U.S. Department of Justice/Office of Justice Programs/Bureau of Justice Assistance, to enhance the current electronic system, provide funding for participating in outreach/education events, and to develop and implement a mechanism to allow for interstate sharing of data.

Prescription data is submitted to the PMP database by dispensing prescribers and pharmacies. All entities dispensing controlled substances in or into the State of Minnesota are required to report data daily, and dispensers who do not dispense a controlled substance on any given day are required to submit a "zero report" each day. PMP staff and a contracted vendor audit the submission of data as well as the data itself to ensure compliance in reporting and data integrity. Noncompliant pharmacies are communicated with by various means and a lack of response to the request to comply are referred to the Board's regulatory section for further consideration. At the end of 2016, the Board licensed over 2,100 pharmacies. Of them, over 1,600 were required to report data to the PMP. Current law allows an exemption from reporting when;

1. The pharmacy is an Opioid Treatment Program facility and therefore is prohibited from reporting according to federal regulations CFR 42;
2. The pharmacy is a licensed hospital pharmacy that distributes controlled substances for inpatient hospital care only;
3. The pharmacy or facility solely distributes controlled substances to individuals through the use of an automated drug distribution system in accordance with Minnesota Statutes 151.58;
4. The pharmacy or facility never dispenses controlled substances in or into the State of Minnesota.

In an effort to stress the importance of accurate data in the PMP, the PMP launched an initiative in the fall of 2015 to better address the quality of prescription data reported to the PMP. All Minnesota licensed pharmacies and uploaders (those who submit data on behalf of the pharmacy) received communication reminding them of the requirement to submit accurate data. Included in the communication was the notice that all dispensers must correct prescription errors inadvertently submitted to the PMP within seven days of the initial submission. The notice informed dispensers and uploaders that PMP staff would be auditing for error resolution and that failure to correct errors may result in notification to the Board's regulatory section for further consideration. Some examples of errors the PMP may receive include invalid national drug code (NDC) numbers, missing patient first or last name, and invalid patient date of birth. Uploaders and/or pharmacies receive system-generated notices when errors occur in their submissions. The data integrity initiative was implemented to ensure pharmacies and uploaders are responding accordingly to these system generated error notices. Data integrity and compliance in reporting are ongoing initiatives by MN PMP staff.

## Prescription Data

In 2016, 7,817,061 federally scheduled II-V controlled substance prescriptions were reported to the PMP database as dispensed. These prescriptions resulted in 456,256,835 total metric units of controlled substances dispensed. Total metric units refers to the summation of all tablets, capsules, milliliters, grams, etc. reported as dispensed. Table 1 lists the top twenty controlled substance medications reported in 2016. Hydrocodone/acetaminophen continues to be the top controlled substance, with over one million prescriptions and 58 million units reported. However, in comparison to 2015, the number of hydrocodone/acetaminophen prescriptions reported has decreased by roughly 12.5%.

**Table 1 Top Twenty Controlled Substance Prescriptions Reported as Dispensed (Generic), 2016**

Drug	2015 Rx Count	2016 Rx Count	% Change	2015 Quantity Dispensed	2016 Quantity Dispensed	% Change
HYDROCODONE/ ACETAMINOPHEN	1,241,901	1,086,445	-12.5%	66,880,839	58,087,539	-13.1%
DEXTROAMPHETAMINE/ AMPHETAMINE	710,348	745,202	4.9%	32,987,581	34,228,059	3.8%
OXYCODONE HCL	674,376	668,445	-0.9%	49,824,073	48,172,634	-3.3%
TRAMADOL HCL	664,211	622,628	-6.3%	54,330,628	50,051,937	-7.9%
OXYCODONE HCL/ACETAMINOPHEN	624,057	544,585	-12.7%	35,176,485	30,981,364	-11.9%
LORAZEPAM	566,678	544,364	-3.9%	26,303,026	24,717,151	-6.0%
ZOLPIDEM TARTRATE	524,754	479,508	-8.6%	17,699,576	16,206,215.35	-8.4%
CLONAZEPAM	438,375	421,855	-3.8%	27,199,411	25,374,297	-6.7%
METHYLPHENIDATE HCL	408,039	409,054	0.2%	20,693,866	20,369,805	-1.6%
ALPRAZOLAM	368,967	357,091	-3.2%	20,183,844	19,244,094	-4.7%
MORPHINE SULFATE	193,622	186,762	-3.5%	16,693,794	11,344,000	-32.0%
DIAZEPAM	182,616	175,320	-4.0%	7,935,420	7,420,452	-6.5%
CODEINE PHOSPHATE/GUAIFENESIN	164,314	166,135	1.1%	29,048,416	28,387,231	-2.3%
ACETAMINOPHEN WITH CODEINE	184,296	160,689	-12.8%	8,568,016	7,475,862	-12.7%
LISDEXAMFETAMINE DIMESYLATE	139,626	160,617	15.0%	4,443,912	5,073,582	14.2%
PREGABALIN	122,014	138,246	13.3%	10,185,673	11,425,334	12.2%
HYDROMORPHONE HCL	97,143	94,248	-3.0%	7,289,892	6,898,324	-5.4%
FENTANYL	97,366	86,953	-10.7%	970,701	861,960	-11.2%
PHENTERMINE HCL	67,205	72,954	8.6%	2,580,409	2,846,184	10.3%
<b>TOTAL</b>	<b>8,167,519</b>	<b>7,817,061</b>	<b>-4.3%</b>	<b>487,371,166</b>	<b>456,256,835</b>	<b>-6.4%</b>

## Dispensed by County

The database was queried by Minnesota County based on the address the recipient provided to the dispenser. Notably, data in the database is as reliable and accurate as the reporting dispenser's records. Hennepin County, with the largest population, had the greatest volume of reported prescriptions in 2016. A correlation was noted between the population of the county and the quantity of prescriptions dispensed for the top four counties. According to population estimates collected by the U.S. Census Bureau, the top ten counties in Minnesota, as of July 1, 2016, by population were: Hennepin (1,232,483); Ramsey (540,649); Dakota (417,486); Anoka (345,957); Washington (253,117); St. Louis (199,980); Stearns (155,652); Olmsted (153,102); Scott (143,680); and Wright (132,550).<sup>(1)</sup> Figure 1 shows the top ten recipient residence counties based on the number of prescriptions reported as dispensed.

**Figure 1. Top Ten Minnesota Recipient Counties by Prescription Count**

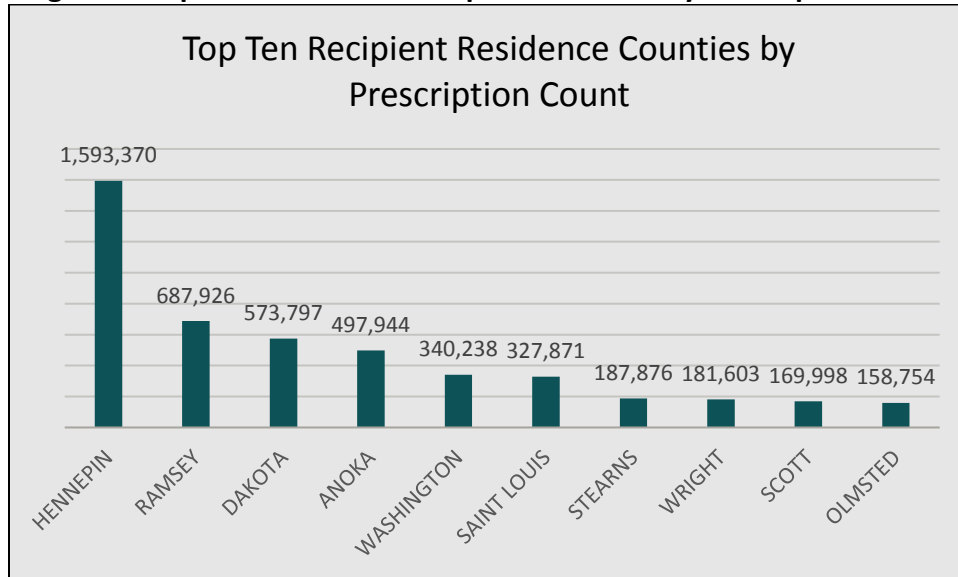


Table 2 shows the total number of controlled substance prescriptions reported as dispensed per recipient residence county in 2016, as well as the county's corresponding population, as of July 1, 2016. When assessing the crude rate, the county with the highest rate of prescriptions dispensed was Koochiching County with 2,038.2 prescriptions per 1,000 persons. The county with the lowest rate of prescriptions dispensed was Houston County with 715.8 prescriptions per 1,000 persons. The state crude rate was 1,366.0 prescriptions per 1,000 persons (prescriptions reported as dispensed to recipients residing in all Minnesota Counties divided by the state population). The rates portrayed are regardless of age or whether or not Minnesota residents filled controlled substance prescriptions in 2016.

**Table 2. Controlled Substance Prescriptions Dispensed by Minnesota Recipient Residence Counties <sup>(1)</sup>**

Geography	2016 Population	2016 Rx Count	Rate per 1,000 residents	Geography	2016 Population	2016 Rx Count	Rate per 1,000 residents	Geography	2016 Population	2016 Rx Count	Rate per 1,000 residents
<b>MINNESOTA</b>	<b>5,519,952</b>	<b>7,540,515</b>	<b>1,366.0</b>	HUBBARD	20,718	29,985	1,447.3	PINE	28,874	47,619	1,649.2
AITKIN	15,583	31,122	1,997.2	ISANTI	39,025	67,586	1,731.9	PIPESTONE	9,202	16,120	1,751.8
ANOKA	345,957	497,944	1,439.3	ITASCA	45,242	82,432	1,822.0	POLK	31,660	55,483	1,752.5
BECKER	33,734	52,219	1,548.0	JACKSON	9,944	12,033	1,210.1	POPE	11,049	17,432	1,577.7
BELTRAMI	46,106	68,503	1,485.8	KANABEC	15,830	31,108	1,965.1	RAMSEY	540,649	687,926	1,272.4
BENTON	39,992	54,315	1,358.1	KANDIYOHI	42,495	54,786	1,289.2	RED LAKE	4,007	5,863	1,463.2
BIG STONE	5,050	8,201	1,624.0	KITSON	4,333	6,713	1,549.3	REDWOOD	15,263	19,722	1,292.1
BLUE EARTH	66,441	86,455	1,301.2	KOOCHICHING	12,628	25,739	2,038.2	RENVILLE	14,660	21,709	1,480.8
BROWN	25,331	34,285	1,353.5	LAC QUI PARLE	6,715	10,808	1,609.5	RICE	65,622	83,968	1,279.6
CARLTON	35,738	56,167	1,571.6	LAKE	10,625	16,160	1,520.9	ROCK	9,564	13,727	1,435.3
CARVER	100,262	126,323	1,259.9	LAKE OF THE WOODS	3,814	5,244	1,374.9	ROSEAU	15,626	22,269	1,425.1
CASS	28,993	50,664	1,747.5	LE SUEUR	27,591	34,475	1,249.5	SAINT LOUIS	199,980	327,871	1,639.5
CHIPPEWA	12,133	17,511	1,443.3	LINCOLN	5,783	7,385	1,277.0	SCOTT	143,680	169,998	1,183.2
CHISAGO	54,748	82,456	1,506.1	LYON	25,699	31,275	1,217.0	SHERBURNE	93,528	132,757	1,419.4
CLAY	62,875	89,159	1,418.0	MAHNOMEN	5,465	10,110	1,850.0	SIBLEY	14,827	18,918	1,275.9
CLEARWATER	8,827	16,385	1,856.2	MARSHALL	9,324	13,586	1,457.1	STEARNS	155,652	187,876	1,207.0
COOK	5,286	6,727	1,272.6	MARTIN	19,829	33,324	1,680.6	STEELE	36,805	57,343	1,558.0
COTTONWOOD	11,470	16,793	1,464.1	MCLEOD	35,842	51,216	1,428.9	STEVENS	9,693	11,116	1,146.8
CROW WING	63,940	101,698	1,590.5	MEEKER	23,110	31,835	1,377.5	SWIFT	9,419	13,204	1,401.8
DAKOTA	417,486	573,797	1,374.4	MILLE LACS	25,866	52,588	2,033.1	TODD	24,233	35,767	1,476.0
DODGE	20,506	18,561	905.1	MORRISON	32,821	53,172	1,620.1	TRAVERSE	3,356	6,606	1,968.4
DOUGLAS	37,456	60,951	1,627.3	MOWER	39,163	54,207	1,384.1	WABASHA	21,273	27,972	1,314.9
FARIBAULT	13,935	21,380	1,534.3	MURRAY	8,329	11,105	1,333.3	WADENA	13,761	25,761	1,872.0
FILLMORE	21,003	21,795	1,037.7	NICOLLET	33,575	42,516	1,266.3	WASECA	18,911	24,584	1,300.0
FREEBORN	30,446	38,597	1,267.7	NOBLES	21,848	22,399	1,025.2	WASHINGTON	253,117	340,238	1,344.2
GOODHUE	46,676	68,383	1,465.1	NORMAN	6,579	11,949	1,816.2	WATONWAN	10,908	14,137	1,296.0
GRANT	5,956	10,207	1,713.7	OLMSTED	153,102	158,754	1,036.9	WILKIN	6,358	9,186	1,444.8
HENNEPIN	1,232,483	1,593,370	1,292.8	OTTER TAIL	58,085	88,551	1,524.5	WINONA	50,948	57,037	1,119.5
HOUSTON	18,814	13,468	715.8	PENNINGTON	14,235	24,329	1,709.1	WRIGHT	132,550	181,603	1,370.1
								YELLOW MEDICINE	9,935	13,897	1,398.8

Table 3 shows the number of controlled substance prescriptions, dispensed to Minnesota recipients by federal schedule, as well as the average number of prescriptions per Minnesota resident, if every resident in the State of Minnesota were to receive one prescription. Of note, a comparison to 2014 cannot be made for schedule IV and V medications, as a full year of data was not collected for tramadol (a schedule IV) and schedule V medications in 2014, due to a law change and system enhancement, which occurred.

**Table 3. Prescription Count and Average of Federally Scheduled Prescriptions Dispensed per Population**

Schedule	2014 RX Count to MN Recipient	2015 RX Count to MN Recipient	2016 RX Count to MN Recipient	% Change from 2015 to 2016	2014 RX Count per MN Population**	2015 RX Count per MN Population**	2016 RX Count per MN Population**
II	4,172,638	4,200,242	3,977,730	-5.3%	0.76	0.77	0.72
III	356,297	365,412	350,851	-4.0%	0.07	0.07	0.06
IV	2,572,010*	3,015,815	2,859,839	-5.2%	n/a*	0.55	0.52
V	128,036*	334,175	352,095	5.4%	n/a*	0.06	0.06
<b>Total</b>	<b>7,228,981</b>	<b>7,915,644</b>	<b>7,540,515</b>	<b>-4.7%</b>	<b>n/a*</b>	<b>1.44</b>	<b>1.37</b>

\*A full year of data was not reported for Schedule V controlled substances or tramadol (a schedule IV) during 2014. A law change and system enhancement occurred during Q3 of 2014. Schedule V controlled substances and tramadol are included in 2014 counts from 9/1/14-12/31/14.

\*\*Prescription count per MN Population is based on US Census Bureau Population estimates, not on the number of recipients to receive controlled substances.

## Opioids

In Minnesota, more than 3.5 million opioid prescriptions were reported as dispensed in 2016 with hydrocodone/acetaminophen, oxycodone, and tramadol ranked as the top three. Table 4 shows the top twenty opiate agonists, as classified by the American Society of Health-System Pharmacists, AHFS® Pharmacologic-Therapeutic Classification© (2), reported by prescription count, as well as a comparison of prescription counts in 2015. There was roughly an 8.6% reduction in opioid prescriptions dispensed from 2015 to 2016.

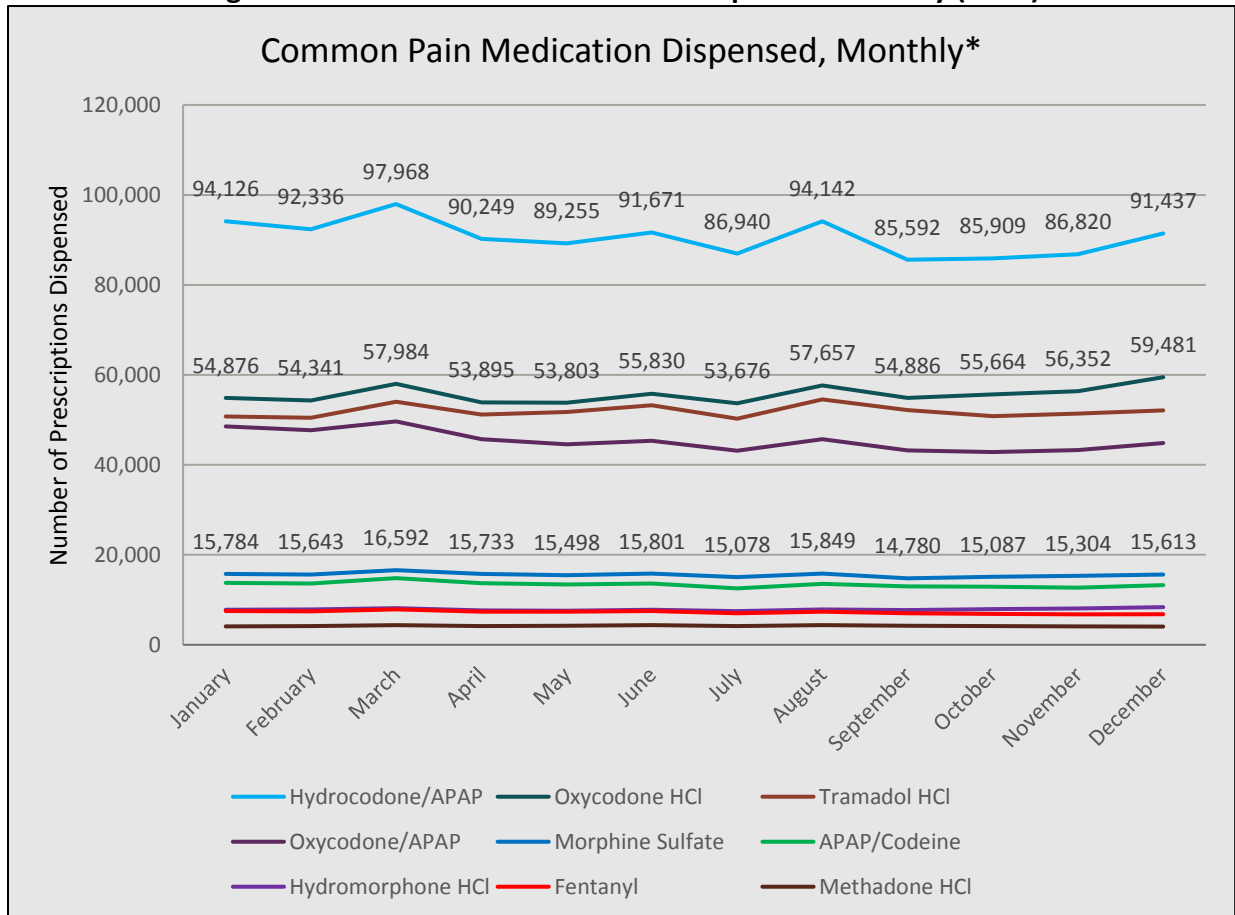
**Table 4. Opioids Reported as Dispensed (2016, Top Twenty)**

Drug	2015 Rx Count	2016 Rx Count	% Change
HYDROCODONE/ACETAMINOPHEN	1,241,901	1,086,445	-12.5%
OXYCODONE HCL	674,376	668,445	-0.9%
TRAMADOL HCL	664,211	622,626	-6.3%
OXYCODONE HCL/ACETAMINOPHEN	624,057	544,585	-12.7%
MORPHINE SULFATE	193,622	186,762	-3.5%
ACETAMINOPHEN WITH CODEINE	184,296	160,689	-12.8%
HYDROMORPHONE HCL	97,143	94,248	-3.0%
FENTANYL	97,366	86,953	-10.7%
METHADONE HCL	53,367	50,395	-5.6%
TRAMADOL HCL/ACETAMINOPHEN	9,909	8,196	-17.3%
HYDROCODONE/IBUPROFEN	6,571	4,901	-25.4%
CODEINE SULFATE	4,007	4,122	2.9%
CODEINE/BUTALBITAL/ASA/CAFFEIN	4,763	4,077	-14.4%
BUTALBIT/ACETAMIN/CAFF/CODEINE	4,535	4,062	-10.4%
TAPENTADOL HCL	2,719	2,863	5.3%
OXYMORPHONE HCL	2,186	2,036	-6.9%
HYDROCODONE BITARTRATE	1,017	1,172	15.2%
OPIUM/BELLADONNA ALKALOIDS	1,004	1,012	0.8%
HYDROMORPHONE HCL/PF	903	808	-10.5%
MEPERIDINE HCL	918	767	-16.4%
<b>TOTAL</b>	<b>3,871,005</b>	<b>3,536,939</b>	<b>-8.6%</b>

## Common Pain Medications

Figure 2 illustrates the number of common pain medications reported as dispensed each month in 2016. Hydrocodone/acetaminophen was largely the number one opioid dispensed each month in 2016.

**Figure 2. Common Pain Medications Dispensed Monthly (2016)**



\*Classified as opiate agonists by AHFS® Pharmacologic-Therapeutic Classification©

Table 5 shows the crude rate of opioid prescriptions, by prescription type per 1,000 residents. For every 1,000 Minnesota residents, regardless of age or whether or not they had any prescriptions filled, there were 615.2 opioid prescriptions reported. The crude rate is based on prescriptions reported per recipient residence county and the county's population, per US Census Bureau population estimates. The rate is shown for the full calendar year and is portrayed by county and statewide. The prescription types included in Table 5 consist of common opiate agonists as categorized by AHFS classification.



**Table 5. Crude rate of opioids dispensed per 1,000 residents by MN recipient residence county <sup>(1)</sup>**

COUNTY	All Opioid Rate	Hydrocodone Rate	Oxycodone Rate	Tramadol Rate	Codeine Rate	Morphine Rate	Fentanyl Rate	Hydromorphone Rate
<b>STATEWIDE</b>	<b>615.2</b>	<b>190.7</b>	<b>210.5</b>	<b>109.4</b>	<b>30.3</b>	<b>32.5</b>	<b>15.3</b>	<b>16.4</b>
AITKIN	1,201.9	388.2	434.4	171.2	44.6	73.3	46.9	26.8
ANOKA	666.9	195.9	272.4	100.0	29.1	30.2	9.9	18.1
BECKER	711.1	294.9	169.3	120.3	38.7	37.0	21.9	15.7
BELTRAMI	728.9	284.0	109.2	220.9	47.4	32.8	14.8	12.5
BENTON	655.3	220.7	189.6	131.5	39.4	44.4	13.1	6.9
BIG STONE	737.4	279.4	89.3	196.8	72.5	45.9	33.9	7.3
BLUE EARTH	520.7	143.3	155.2	139.1	20.6	29.5	16.3	10.7
BROWN	605.2	207.6	170.1	124.9	26.1	29.2	24.3	10.9
CARLTON	838.6	355.1	177.0	170.9	35.0	47.8	19.9	12.4
CARVER	503.8	184.3	161.0	73.8	26.1	24.6	12.4	14.8
CASS	892.8	352.2	194.8	183.2	48.4	53.3	27.2	19.4
CHIPPEWA	732.4	252.0	156.5	158.0	39.7	34.5	62.4	19.0
CHISAGO	753.0	233.8	279.7	109.3	29.9	41.0	20.6	23.6
CLAY	530.3	203.8	115.0	118.7	24.6	28.4	20.5	12.1
CLEARWATER	924.0	345.2	168.3	260.5	45.4	27.4	42.6	22.9
COOK	687.9	270.5	180.5	116.7	31.0	42.8	18.5	20.2
COTTONWOOD	729.9	242.3	117.6	223.0	35.6	35.1	67.9	4.5
CROW WING	727.2	268.8	218.7	124.9	31.7	39.5	20.6	13.8
DAKOTA	569.9	167.5	219.4	84.7	29.1	29.2	11.5	17.6
DODGE	403.2	79.6	151.3	110.7	16.7	19.7	9.6	13.9
DOUGLAS	752.2	274.0	185.9	174.0	47.8	33.9	18.8	13.0
FARIBAULT	775.5	226.5	193.1	242.1	26.0	62.6	15.7	6.0
FILLMORE	532.5	118.5	145.0	177.6	23.1	29.9	19.8	15.1
FREEBORN	586.6	163.1	149.8	184.6	16.8	32.0	20.1	17.1
GOODHUE	733.8	171.8	265.1	157.7	32.8	48.1	25.8	23.5
GRANT	788.4	265.1	237.4	172.3	41.6	31.1	19.1	18.8
HENNEPIN	540.9	151.0	224.4	72.2	28.4	28.2	9.3	19.3
HOUSTON	339.4	133.4	58.4	94.2	8.9	12.2	20.9	7.4
HUBBARD	683.8	236.1	172.5	136.5	35.5	39.1	28.4	20.9
ISANTI	899.1	257.4	389.0	102.5	35.0	54.5	22.8	19.3
ITASCA	893.7	313.5	256.1	174.3	43.5	46.1	20.3	22.3
JACKSON	499.1	182.7	74.4	167.4	29.5	19.1	19.0	6.0
KANABEC	1,155.5	325.0	496.7	140.0	33.7	86.4	23.1	29.1
KANDIYOHI	572.4	195.1	128.3	137.4	42.8	32.9	18.5	8.8
KITTSOON	721.2	222.5	127.6	164.8	47.1	59.5	82.6	5.3
KOOCHICHING	934.9	326.5	222.4	209.2	43.6	61.0	32.0	24.2
LAC QUI PARLE	800.9	279.5	146.4	197.0	35.1	58.8	65.8	9.4
LAKE	803.4	327.7	174.1	138.6	38.2	54.5	38.5	16.8
LAKE OF THE WOODS	792.1	282.9	168.3	213.2	38.8	27.0	43.8	7.3
LE SUEUR	586.0	166.5	193.0	135.7	25.4	26.9	18.6	13.4
LINCOLN	556.3	173.6	91.0	200.6	33.4	18.8	29.1	6.4
LYON	520.9	206.2	85.4	136.1	30.5	21.8	23.2	7.4
MAHONOMEN	738.0	344.7	154.8	122.8	46.8	20.3	25.3	13.4
MARSHALL	656.4	210.5	147.8	162.2	50.4	32.2	32.2	8.2
MARTIN	778.4	273.2	181.8	199.4	30.7	44.7	34.3	8.7
MCLEOD	689.5	236.9	198.4	124.2	43.1	44.2	21.6	11.7
MEEKER	725.7	236.6	185.5	168.5	29.4	46.5	38.5	11.9
MILLE LACS	1,124.3	350.0	432.5	158.7	45.3	67.2	21.8	25.6
MORRISON	818.4	310.3	217.2	177.5	33.8	44.8	18.3	7.5
MOWER	620.3	153.4	198.1	172.1	20.9	37.4	16.1	15.2

**Table 5. Continued**

COUNTY	All Opioid Rate	Hydrocodone Rate	Oxycodone Rate	Tramadol Rate	Codeine Rate	Morphine Rate	Fentanyl Rate	Hydromorphone Rate
<b>STATEWIDE</b>	<b>615.2</b>	<b>190.7</b>	<b>210.5</b>	<b>109.4</b>	<b>30.3</b>	<b>32.5</b>	<b>15.3</b>	<b>16.4</b>
MURRAY	596.6	203.6	76.4	202.4	28.0	39.0	42.7	2.9
NICOLLET	488.3	140.8	137.8	140.0	24.1	21.0	13.8	5.4
NOBLES	455.1	185.2	59.3	136.3	25.2	24.7	19.8	1.8
NORMAN	735.4	269.8	130.0	186.0	34.2	50.5	40.0	9.0
OLMSTED	431.7	84.8	152.3	129.9	14.8	17.4	9.6	20.0
OTTER TAIL	753.4	247.8	187.3	181.9	37.3	41.6	34.5	15.0
PENNINGTON	786.2	284.2	145.8	193.3	64.4	57.7	22.9	6.3
PINE	981.2	324.9	350.0	142.5	28.2	72.2	24.2	23.7
PIPESTONE	757.2	299.1	149.3	195.3	32.9	46.1	25.5	4.6
POLK	770.7	268.5	178.8	170.9	52.9	38.8	43.4	6.6
POPE	808.1	289.9	196.2	147.5	32.8	54.9	60.8	18.9
RAMSEY	595.2	152.8	242.0	88.7	33.7	32.3	12.0	19.6
RED LAKE	690.0	250.1	136.0	179.9	46.2	34.7	27.7	3.7
REDWOOD	620.5	210.4	141.9	154.4	26.2	25.1	47.4	8.1
RENVILLE	718.5	290.3	160.6	127.2	56.9	32.8	32.7	11.2
RICE	599.1	186.8	207.5	122.1	21.9	33.2	11.7	8.2
ROCK	692.1	257.6	141.5	172.5	27.1	41.4	39.9	0.8
ROSEAU	675.7	220.0	162.2	154.2	56.5	38.1	27.3	4.7
SAINT LOUIS	747.6	313.6	168.3	145.8	29.3	37.5	16.4	18.6
SCOTT	508.5	160.2	191.9	71.4	24.4	26.1	8.9	17.9
SHERBURNE	663.3	216.3	254.6	98.4	27.9	29.4	13.3	13.5
SIBLEY	663.9	238.6	192.4	121.1	32.0	42.3	17.9	8.9
STEARNS	555.5	189.4	150.3	122.1	32.0	34.1	15.9	6.1
STEELE	633.4	185.3	181.6	198.0	22.9	23.3	10.7	9.6
STEVENS	492.0	172.6	125.2	116.8	35.8	15.8	13.6	7.7
SWIFT	682.7	249.3	132.4	142.1	50.0	31.2	42.3	30.2
TODD	809.7	325.9	181.2	154.3	45.1	46.8	33.7	8.3
TRAVERSE	848.6	382.3	150.2	160.3	63.8	20.3	46.8	8.0
WABASHA	616.2	139.1	180.8	212.5	26.0	23.1	15.9	14.0
WADENA	962.9	346.3	240.9	177.7	58.3	44.7	58.3	23.7
WASECA	563.5	163.6	171.0	159.5	22.5	22.2	15.9	7.0
WASHINGTON	582.2	168.8	225.5	79.4	31.2	31.5	13.1	18.3
WATONWAN	643.7	197.5	188.2	163.9	21.5	37.6	23.3	6.5
WILKIN	662.9	257.8	118.6	150.7	51.1	44.8	25.2	8.5
WINONA	528.7	166.9	139.3	135.8	17.7	29.6	20.7	12.1
WRIGHT	623.8	201.0	233.1	92.7	25.8	36.8	12.9	12.3
YELLOW MEDICINE	718.6	231.2	115.1	215.5	39.8	35.3	65.4	7.1

## Partial Opiate Agonists

Partial opiate agonists are commonly used to treat pain or opioid dependence. The most frequent partial opiate agonist reported as dispensed in 2016 was buprenorphine/naloxone (i.e. Suboxone®, Bunavail®, Zubsolv®). Table 6 shows the number of partial opiate agonists reported as dispensed, by prescription count, in 2016 as well as a comparison of partial opiate agonists reported in 2015. Of note, if an Opioid Treatment Program dispensed a partial opiate agonist, the dispensing history is not reported to the database as they are prohibited from reporting according to federal regulations CFR 42.

**Table 6. Partial Opiate Agonists Reported as Dispensed (2016)**

Drug	2015 RX Count	2016 Rx Count	% Change
BUPRENORPHINE HCL/NALOXONE HCL	56,863	66,598	17.1%
BUPRENORPHINE HCL	9,383	11,014	17.4%
BUPRENORPHINE	5,284	4,376	-17.2%
BUTORPHANOL TARTRATE	2,045	1,968	-3.8%
PENTAZOCINE HCL/NALOXONE HCL	312	206	-34.0%
<b>TOTAL</b>	<b>73,887</b>	<b>84,162</b>	<b>13.9%</b>

## Stimulants

The stimulants shown below, as categorized by the American Society of Health-System Pharmacists' AHFS classifications, consist of anorexigenic agents and respiratory and central nervous system stimulants. <sup>(2)</sup> In 2016, the leading controlled substance stimulants reported were dextroamphetamine/amphetamine (i.e. Adderall®, Adderall XR®), methylphenidate HCl (i.e. Concerta®, Ritalin®, Metadate®, etc.) and lisdexamfetamine (i.e. Vyvanse®). The top ten stimulants reported as dispensed are shown in Table 7 as well as a comparison of prescriptions reported in 2015.

**Table 7. Stimulants Reported as Dispensed (2016, Top Ten)**

Drug	2015 Rx Count	2016 Rx Count	% Change
DEXTROAMPHETAMINE/AMPHETAMINE	710,348	745,202	4.9%
METHYLPHENIDATE HCL	408,039	409,054	0.2%
LISDEXAMFETAMINE DIMESYLATE	139,626	160,617	15.0%
PHENTERMINE HCL	67,205	72,954	8.6%
DEXMETHYLPHENIDATE HCL	29,777	31,820	6.9%
DEXTROAMPHETAMINE SULFATE	28,668	28,117	-1.9%
MODAFINIL	25,346	26,632	5.1%
ARMODAFINIL	15,934	14,200	-10.9%
METHYLPHENIDATE	6,933	4,267	-38.5%
LORCASERIN HCL	3,426	2,877	-16.0%
<b>TOTAL</b>	<b>1,439,748</b>	<b>1,500,030</b>	<b>4.2%</b>

## Sedatives

The medications in the group of sedatives below consist of anxiolytics, sedatives, hypnotics, and miscellaneous as classified by AHFS pharmacologic-therapeutic classification. <sup>(2)</sup> Of the controlled substances, zolpidem tartrate (i.e. Ambien®, Ambien CR®, etc.) was the leading sedative reported as dispensed. Table 8 provides an overview of the top five sedatives reported as dispensed, by prescription count, in 2015 and 2016.

**Table 8. Sedatives Reported as Dispensed (2016, Top Five)**

Drug Code	2015 Rx Count	2016 Rx Count	% Change
ZOLPIDEM TARTRATE	524,754	479,508	-8.6%
ESZOPICLONE	48,036	49,119	2.3%
ZALEPLON	19,585	19,392	-1.0%
SUVOREXANT	2,930	5,734	95.7%
MEPROBAMATE	462	382	-17.3%
<b>TOTAL</b>	<b>595,902</b>	<b>554,242</b>	<b>-7.0%</b>

## Benzodiazepines

Benzodiazepines are medications that can have anticonvulsant, anxiolytic, hypnotic, muscle relaxant, and sedative properties. Just under 1.6 million benzodiazepines were reported as dispensed in 2016. The leading medications consist of lorazepam, clonazepam, and alprazolam. Table 9 shows the top ten benzodiazepines reported as dispensed, by prescription count, in 2015 and 2016. There was roughly a 3.8% reduction in benzodiazepines reported from 2015 to 2016.

**Table 9. Benzodiazepines Reported as Dispensed (2016, Top Ten)**

Drug	2015 Rx Count	2016 Rx Count	% Change
LORAZEPAM	566,678	544,364	-3.9%
CLONAZEPAM	438,375	421,855	-3.8%
ALPRAZOLAM	368,967	357,091	-3.2%
DIAZEPAM	182,616	175,320	-4.0%
TEMAZEPAM	71,245	67,004	-6.0%
TRIAZOLAM	10,838	10,295	-5.0%
CLOBAZAM	4,640	5,697	22.8%
CLORAZEPATE DIPOTASSIUM	3,893	3,472	-10.8%
CHLORDIAZEPOXIDE HCL	2,728	2,727	0.0%
OXAZEPAM	1,947	1,710	-12.2%
<b>TOTAL</b>	<b>1,656,330</b>	<b>1,594,138</b>	<b>-3.8%</b>

## Muscle Relaxants

Of the centrally acting skeletal muscle relaxants, as categorized by AHFS classification, carisoprodol is the only medication that is a controlled substance. The number of carisoprodol-containing prescriptions that were reported to the MN PMP in 2015 and 2016 are listed in Table 10 below.

**Table 10. Muscle Relaxants Reported as Dispensed (2016)**

Drug Code	2015 Rx Count	2016 Rx Count	% Change
CARISOPRODOL	26,432	22,529	-14.8%
CARISOPRODOL/ASPIRIN/CODEINE	20	13	-35.0%
CARISOPRODOL/ASPIRIN	<10	<10	-37.5%
<b>TOTAL</b>	<b>26,460</b>	<b>22,547</b>	<b>-14.8%</b>

## Antitussives

Of the antitussives (or cough suppressants) categorized by AHFS classification, hydrocodone and codeine are the only medications scheduled as controlled substances. Table 11 shows the top five antitussives reported as dispensed, by prescription count, in 2015 and 2016.

**Table 11. Antitussives Reported as Dispensed (2016, Top Five)**

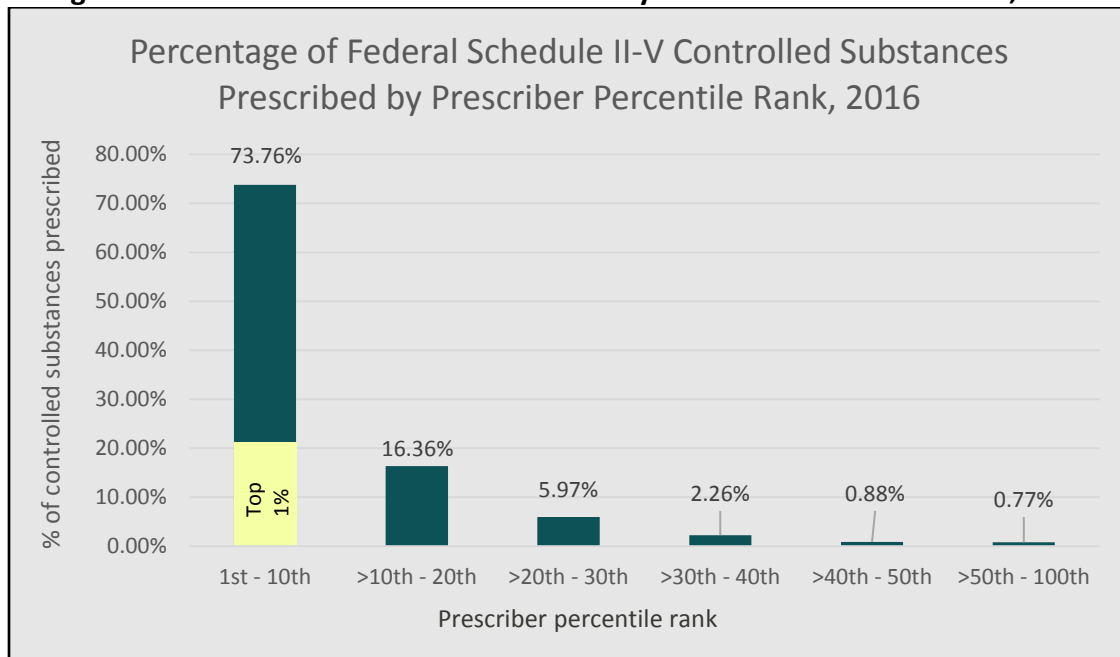
Drug	2015 Rx Count	2016 Rx Count	% Change
CODEINE PHOSPHATE/GUAIFENESIN	164,314	166,135	1.1%
PROMETHAZINE HCL/CODEINE	11,995	10,087	-15.9%
HYDROCODONE/CHLORPHEN P-STIREX	3,151	2,434	-22.8%
HYDROCODONE BIT/HOMATROP ME-BR	1,255	1,287	2.5%
PROMETHAZINE/PHENYLEPH/CODEINE	254	145	-42.9%
<b>TOTAL</b>	<b>181,106</b>	<b>180,190</b>	<b>-0.5%</b>

## Key Findings- Prescribers and Recipients (2016)

Data from the database were analyzed to identify the key findings noted below:

- The top 500 prescribers prescribed 21.5% of all controlled substance prescriptions reported as dispensed and 25% of the total quantity reported as dispensed (in metric units).
- Of the top 100 prescribers of controlled substances reported, 92% have requested and obtained access to the MN PMP.
- Figure 3 shows the percentage of schedule II-V controlled substances written by prescribers by percentile ranking. This is based on unique prescriber identifiers reported by dispensers. Of note, the top 1% of prescribers contributed to 21.3% of all schedule II-V controlled substances reported to the MN PMP.

**Figure 3. Controlled Substances Prescribed by Prescriber Percentile Rank, 2016**



- 122 recipients filled prescriptions from 20 or more different prescribers in 2016. This assessment includes all prescriptions reported to the database (i.e. butalbital).
  - One recipient obtained prescriptions from 53 different prescribers.
- 37 recipients obtained and were dispensed controlled substance prescriptions from 10 or more prescribers AND had their prescriptions filled at 10 or more pharmacies from January to June, and 36 recipients met these criteria from July to December. This assessment includes all prescriptions reported to the database (i.e. butalbital).

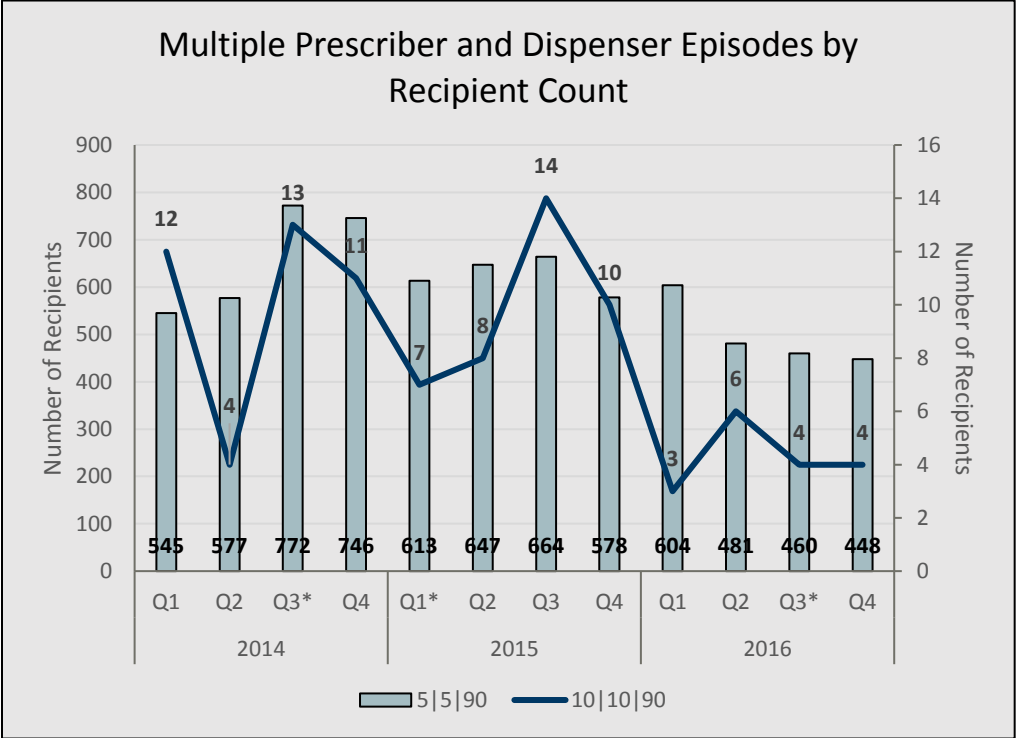
- When the criteria is narrowed to 10 or more prescribers AND 10 or more pharmacies in a quarter, the number of recipients meeting this threshold are identified in table 12.

**Table 12. Key Findings – Recipient**

Timeframe	Number of Recipients who met Threshold (10/10/90)	Highest Number of Prescribers Identified
1/1/16 – 3/31/16	3	16
4/1/16 – 6/30/16	6	17
7/1/16 – 9/30/16	4	14
10/1/16 – 12/31/16	4	22

- Figure 4 shows multiple prescriber and dispenser episodes for 2014, 2015, and 2016. The thresholds incorporated consist of 5/5/90 (5 prescribers or more plus 5 dispensers or more in 90 days) as well as 10/10/90 (10 prescribers or more plus 10 dispensers or more in 90 days). A few noteworthy items occurred which may contribute to trends seen in Figure 4. See footnotes beneath Figure 4. This assessment includes all prescriptions reported to the database (i.e. butalbital and gabapentin).

**Figure 4. Multiple Prescriber and Dispenser Episodes by Recipient Count**



\*In Q3 2014, the law changed requiring dispensers to report tramadol and schedule V medications to the PMP.

In Q1 2015, PMP staff began sending unsolicited notices to prescribers and dispensers regarding individuals with high-risk patient behavior, thereby alerting them to view the PMP and to discuss any concerns they may have with their patient. In Q3 2016, the law changed requiring dispensers to report gabapentin to the PMP.

## Database Account Access

The following sections will cover PMP system account holders and their use of the MN PMP. During the 2016 legislative session Minnesota Statutes Section 152.126 was amended to require prescribers and pharmacists practicing within Minnesota to register for a PMP account. By July 1, 2017, every prescriber licensed by a MN health-licensing board practicing within this state who is authorized to prescribe controlled substances, for humans, and who holds a current registration issued by the federal Drug Enforcement Administration, and every pharmacist licensed by the Board and practicing within the state, must register and maintain a user account with the PMP. While viewing this data, it is important to remember that it is unlikely that 100% of prescribers and pharmacists licensed in MN would obtain access to the MN PMP unless the above qualifications are met. It is estimated that by the end of 2016, 39% all MN licensed prescribers and 69% of all MN licensed pharmacists have requested and obtained access to the PMP.

Since the program began in 2010, there has been a steady increase in the number of authorized system account holders accessing the PMP database. Table 13 shows the average number of new account requests the PMP has received daily since 2010.

**Table 13. Average Number of New Account Requests per Day**

<b>Year</b>	<b>New Account Requests (Average)</b>
2010	12.2 per day*
2011	8.2 per day
2012	10.4 per day
2013	13.2 per day
2014	15.8 per day
2015	17.7 per day
2016	21.5 per day

*\*Accounts requested per day in 2010 are reflective beginning April 1, 2010.*

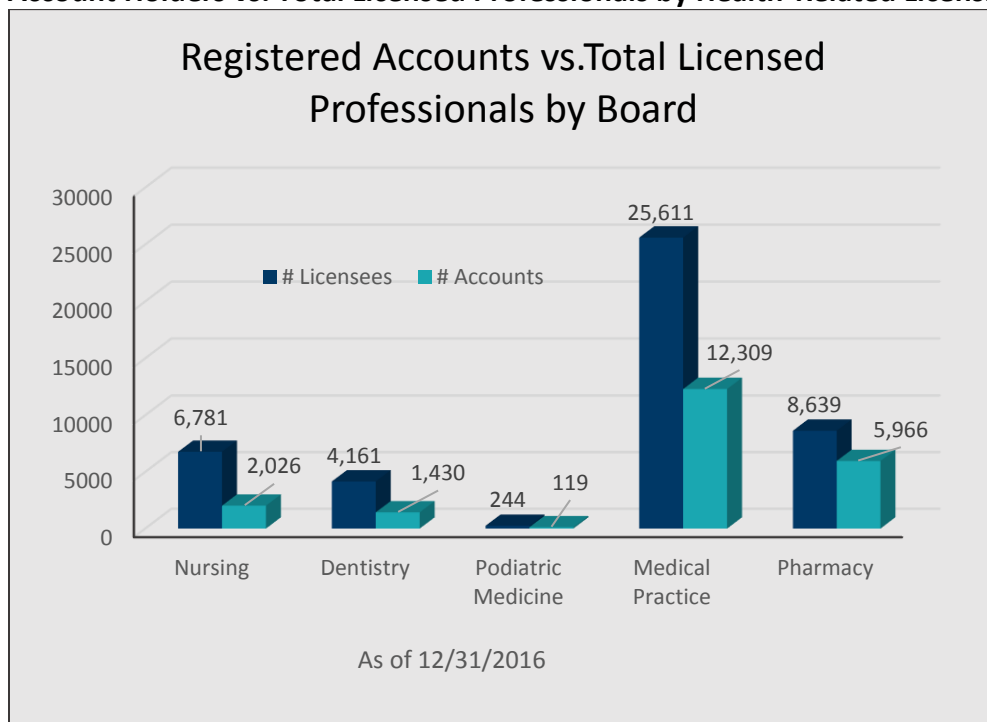
*Access to data was not available prior to this date.*

Prescribers and Pharmacists can request an account through the PMP online registration system. After verifying the individual has an active license to dispense or prescribe controlled substances and in the case of prescribers, has a Drug Enforcement Agency (DEA) registration number, may be granted access to the MN PMP. The Boards of Medical Practice and Pharmacy have successfully integrated automatic registration into their online license renewal system. These approved accounts are identified as Master accounts, and may delegate the responsibility to an individual(s) holding a valid PMP Delegate account.



The dark blue bar in Figure 5 shows registered accounts in the database arranged by the board that licenses the individual. The teal bar shows the number of individuals that are licensed by that particular board. Note: The number of prescribers includes all prescribers licensed by the various boards regardless of where they practice or if they have a DEA registration to prescribe controlled substances. There are licensees within these licensing boards that do not actively prescribe or treat patients (administrative positions, research, education, etc.). There are also individuals included in the total licensed professional's column that are licensed in MN but may practice in another state, are retired or not practicing. Licensed professionals included under Dentistry are DMD and DDS, under Pharmacy are RPh, and under Medical Practice are MD, DO, PA's and Residents. The column representing total licensed professionals by the Board of Nursing represents only APRNs who are eligible to register with the DEA to prescribe controlled substances.

**Figure 5. Account Holders vs. Total Licensed Professionals by Health-Related Licensing Boards**



## Database Utilization

Just as the number of account holders has grown over time, so has the utilization of the database. Figure 6 below shows the total number of queries performed during the past six years of operation. It also depicts the increase in account holders querying the database over time. 2016 has shown a considerable increase in accounts and utilization of the database.

**Figure 6. Total Account Holders and Queries (2010-2016)**

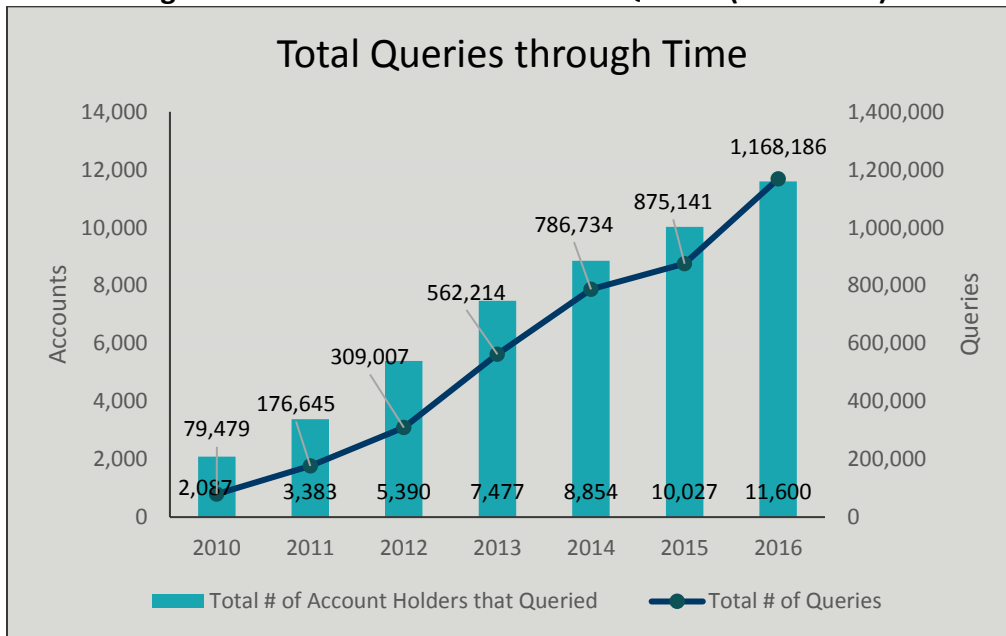
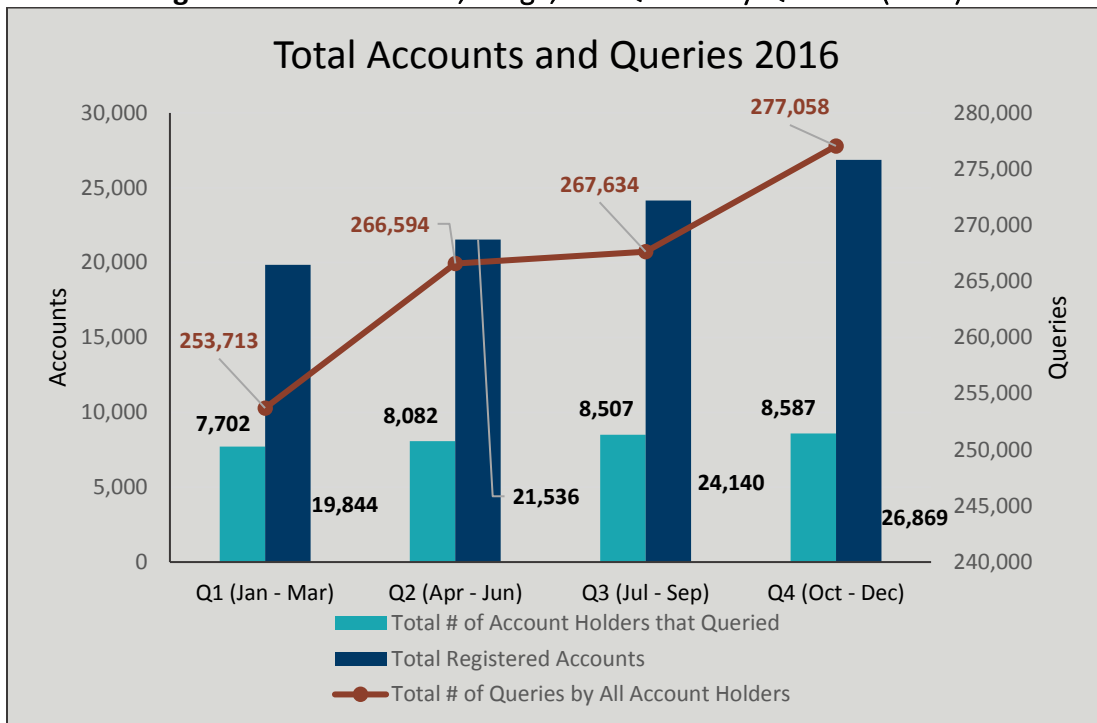


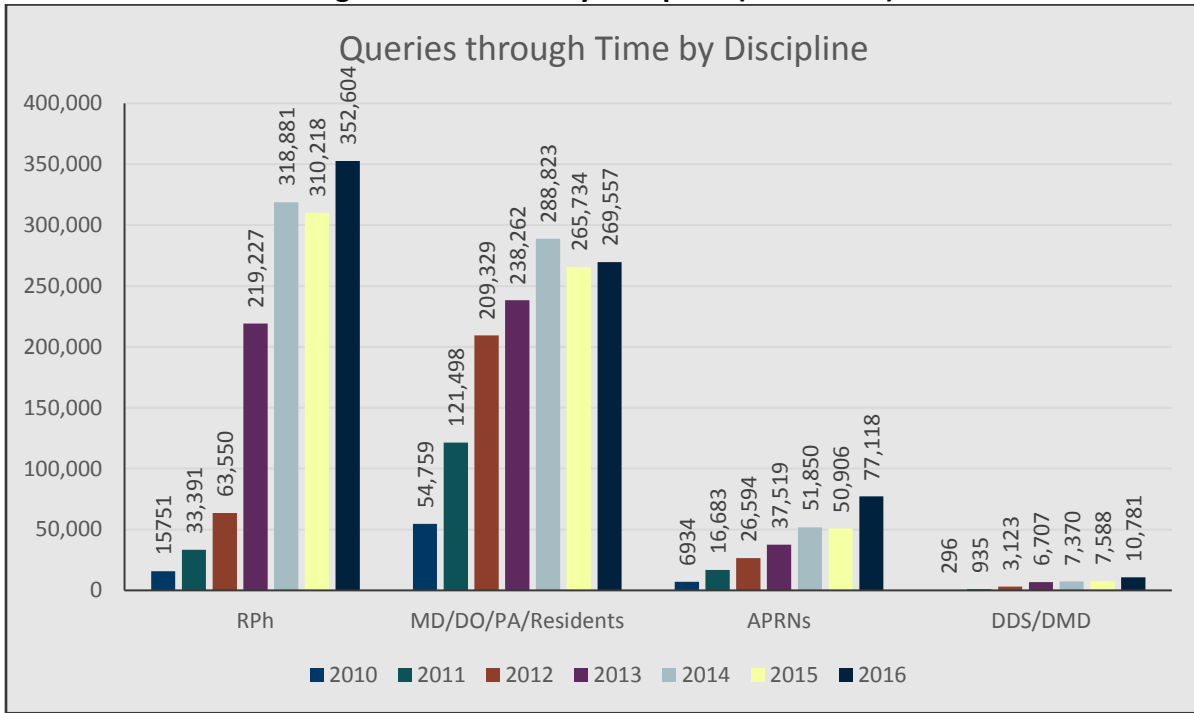
Figure 7 represents the quarterly utilization throughout 2016. It provides the number of registered account holders, the number of account holders that queried during the timeframe, as well as the number of queries performed during each quarter. A steady increase in usage is noted throughout 2016.

**Figure 7. Total Accounts, Usage, and Queries by Quarters (2016)**

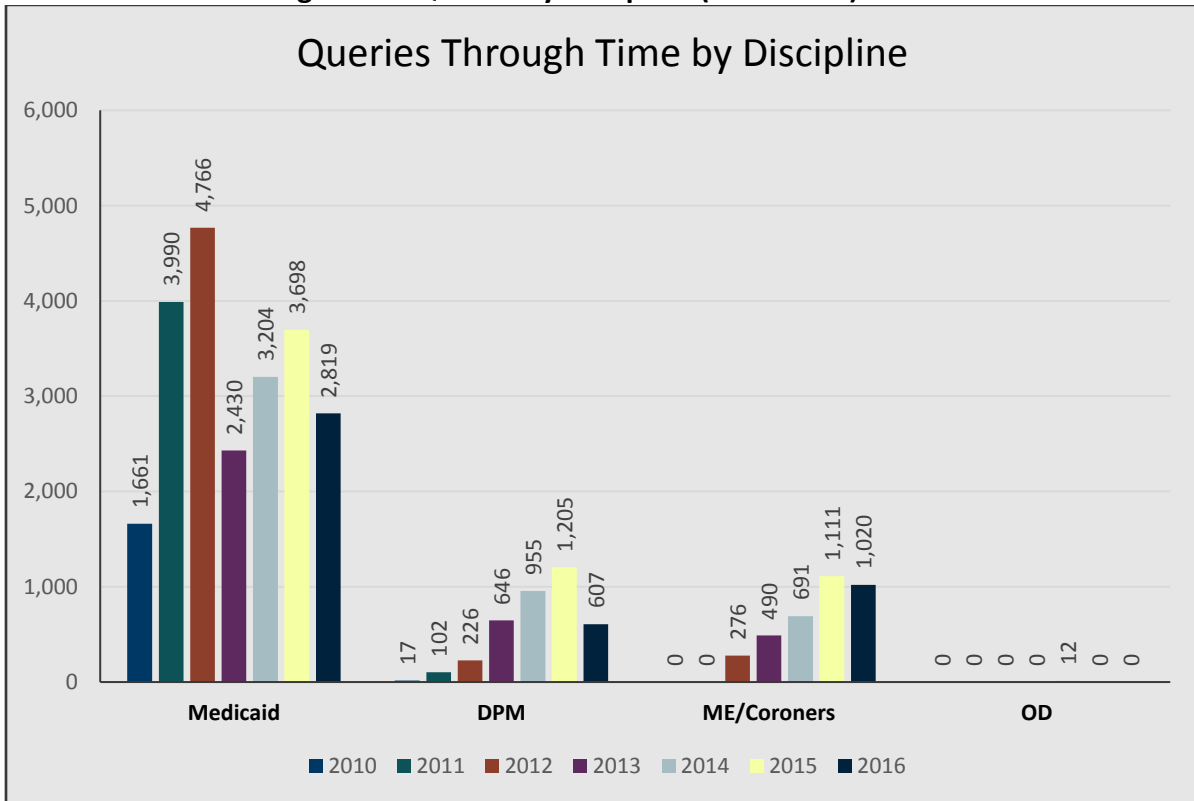


Figures 8a and 8b illustrate the number of queries performed by each discipline throughout time. Each license type has shown increase in usage of the database over the past five years with the most common system account holders being pharmacists, medical doctors, doctors of osteopathy, physician assistants, and residents. It is worth noting that a registered account holder who holds a Master Account may not appear to be querying the database when in reality their delegate is requesting data on their behalf.

**Figure 8a. Queries by Discipline (2010-2016)**

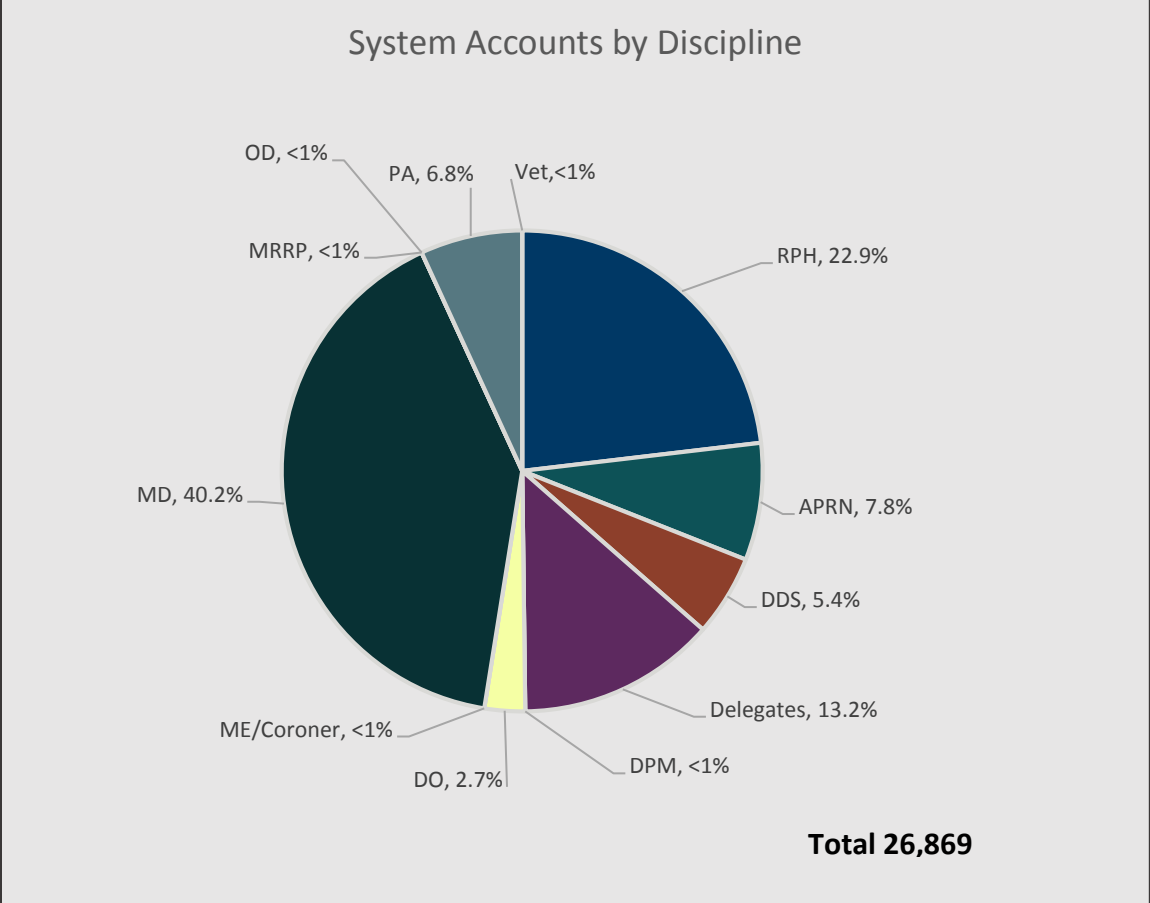


**Figure 8b. Queries by Discipline (2010-2016) cont.**



At the end of 2016, there were 26,869 registered account holders. The license type of the account holders is shown in Figure 9 with the highest percentage of registered accounts belonging to MDs and RPHs.

**Figure 9. System Accounts by License Type (2016)**

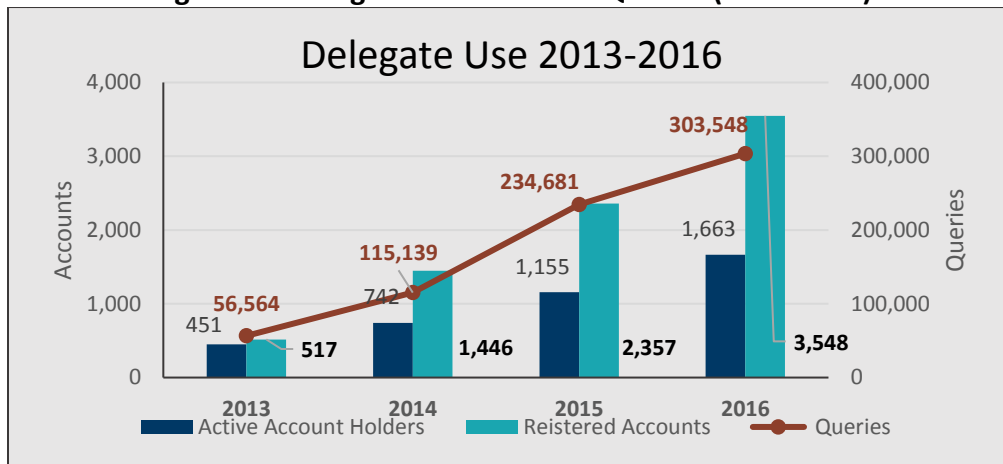


## Delegate Accounts

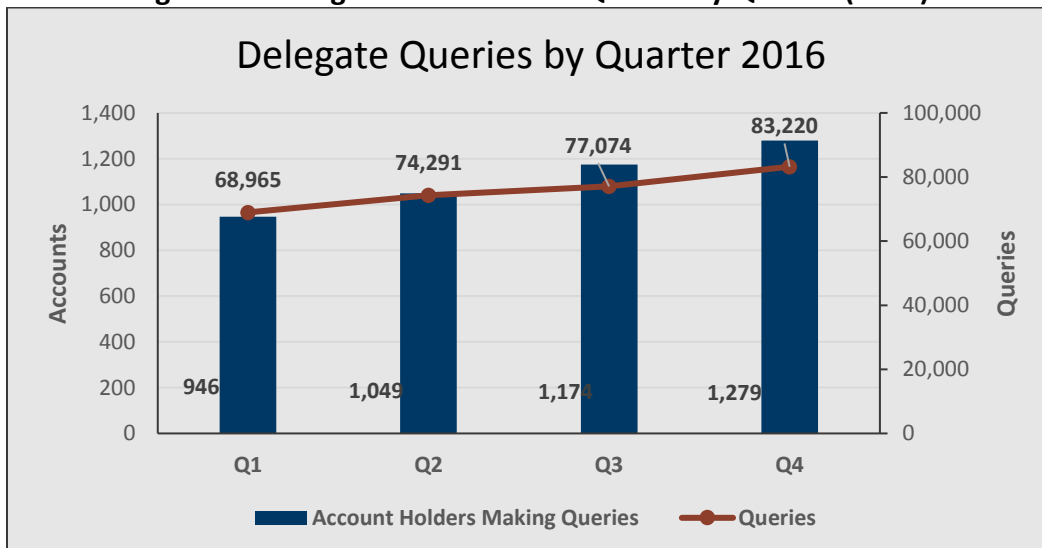
MN statutes allow for prescribers and pharmacists (Master Account Holders) to delegate the task of accessing the PMP database to an employee under their direction. Delegates must apply for and be granted an individual account which once “linked” to a Master Account Holder’s account, will allow access to the database. Linking a delegate to a master account makes the Master Account Holder accountable for a delegate’s access to the database.

The number of delegate accounts has increased almost sevenfold since 2013. Figure 10 shows the number of delegates that registered for an account from 2013 to 2016, as well as the number of queries and how many delegate account holders performed those queries. Figure 11 shows the increase in use by quarter in 2016. It is significant to note that as prescriber and dispenser query counts remain relatively static, delegate queries increased by 29% in 2016.

**Figure 10. Delegate Accounts and Queries (2013-2016)**



**Figure 11. Delegate Accounts and Queries by Quarter (2016)**



## Other Permissible Use of PMP Data

In addition to prescribers, pharmacists, and their delegates, the law allows others to obtain data from the PMP. Using a valid search warrant, law enforcement officials can receive a report that contains any or all of the following data:

- a recipient's controlled substance prescription history,
- the history of all prescriptions associated with a particular prescriber based on their Federal Drug Enforcement Administration (DEA) registration or
- the history of all prescriptions reported as dispensed by a particular dispenser.

In all cases, the MN Board of Pharmacy staff assigned the duties of administering the PMP, access the database and the resulting report is sent to the requestor. In 2016, law enforcement officials presented the MN PMP with 806 search warrants, a 23% increase from the search warrants received in 2015.

The recipients of the controlled substance prescriptions reported to the PMP are also permitted to obtain information regarding their own prescription history. A request for release of the data, which has been signed in the presence of a notary public and sent to the PMP office, is required. As with requests made by law enforcement officials, the PMP staff access the database and the resulting report is sent to the requestor. A provision was put in place that will also allow the recipient to give consent for release of the report to a third party. Legal counsel, probation officials, MN Health Licensing Boards, and others have used this provision. In 2016, the PMP staff processed 364 requests from recipients or their designee, a 17% increase in requests from 2015.

Figure 12 shows the number of law enforcement and recipient requests received throughout 2016.

**Figure 12. Law Enforcement and Recipient Requests (2016)**

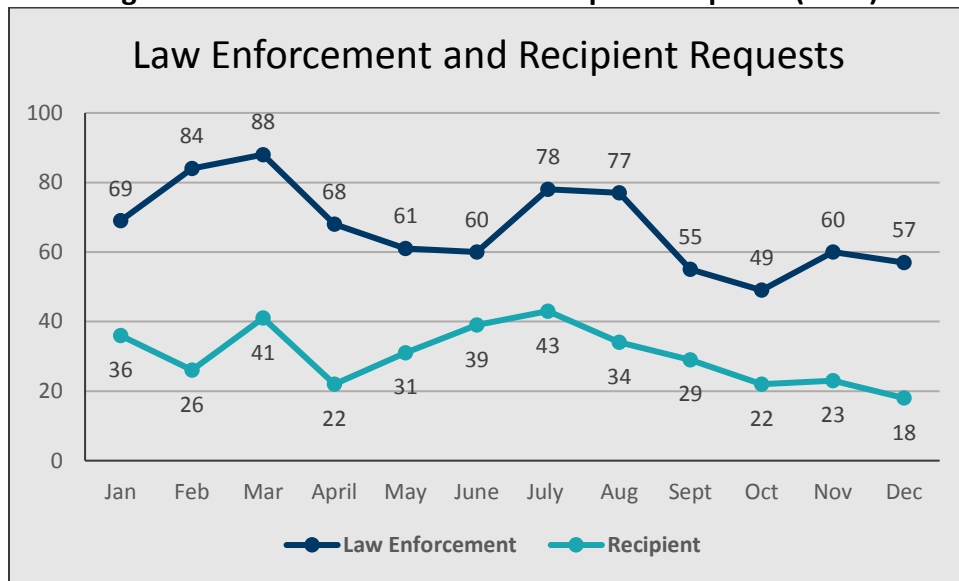
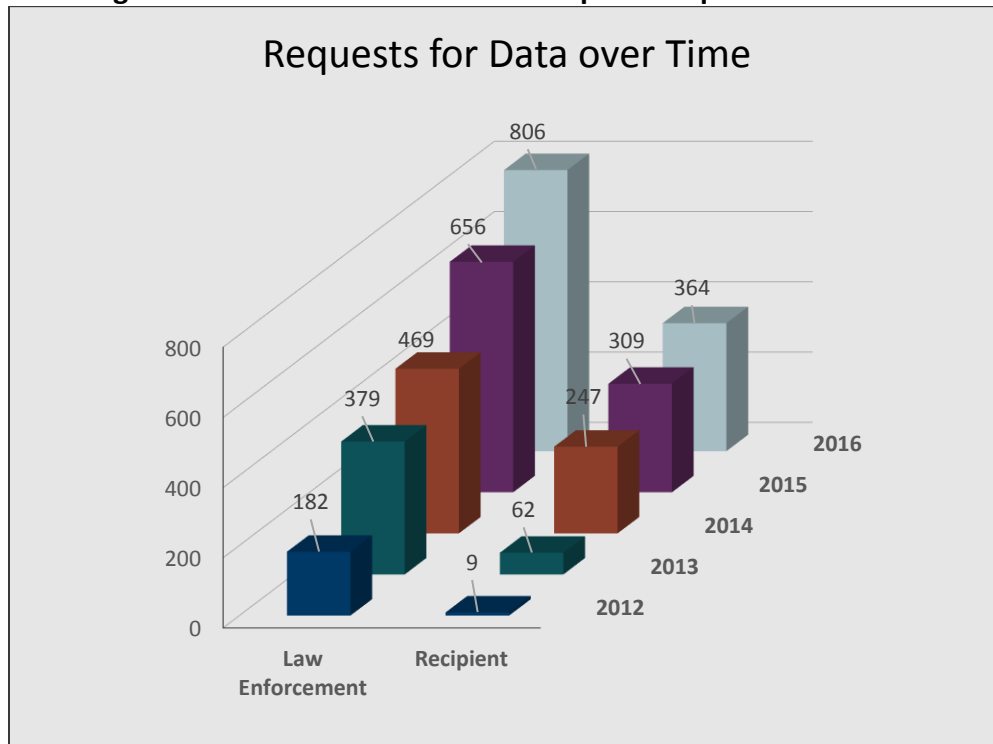


Figure 13 shows the increase in requests received from law enforcement and individuals in the period between 2012 and 2016.

**Figure 13. Law Enforcement and Recipient Requests Over Time**





## Multiple State Data Exchange

The MN PMP has been participating in an interstate data exchange system since July 2014. [MN Stats. §152.126, Subd. 6\(g\)](#) permits the Board to participate in a system, provided that permissible account holders in other states have access to the MN data only as allowed under MN law. The Board chose to utilize the [National Association of Boards of Pharmacy \(NABP\)](#) PMP InterConnect hub solution to facilitate the sharing of prescription monitoring program data across state lines to authorized account holders. It allows participating state PMPs across the United States to share data, providing a more effective means of combating drug diversion and drug abuse nationwide. It should be noted that the “hub” retains no PMP data. The PMP InterConnect merely acts as a pass through for transferring data to the requesting state’s PMP account holder. Each participating PMP controls who from collaborating states can access their data based on their own laws and regulations.

At the end of 2016, there were 37 State PMPs, including MN, participating in the PMP InterConnect with MN actively exchanging data with 29 of those states. Table 14 shows the states MN is actively exchanging data within the PMP InterConnect. Only approved MN prescribers, pharmacists, and their delegates holding active MN PMP accounts have access to data from participating states.

**Table 14. States Actively Exchanging PMP Data with MN**

Alaska*	Kansas*	Oklahoma
Arizona*	Kentucky	Rhode Island
Arkansas*	Massachusetts	South Carolina
Colorado	Mississippi	South Dakota*
Connecticut*	Nevada*	Tennessee
Delaware	New Jersey*	Texas*
Idaho	New Mexico	Virginia*
Illinois*	New York	West Virginia
Indiana	North Dakota	Wisconsin*
Iowa	Ohio *	

*\*MN delegates are not permitted by state to access their data.*

Authorized MN PMP account holders made 1,066,811 data requests to other participating states in 2016. During this same time, other participating state’s authorized PMP account holders made 891,378 data request to the MN PMP database. Figure 14 is a breakdown of data requests, by month.

**Figure 14. Multiple State Queries-Monthly (2016)**

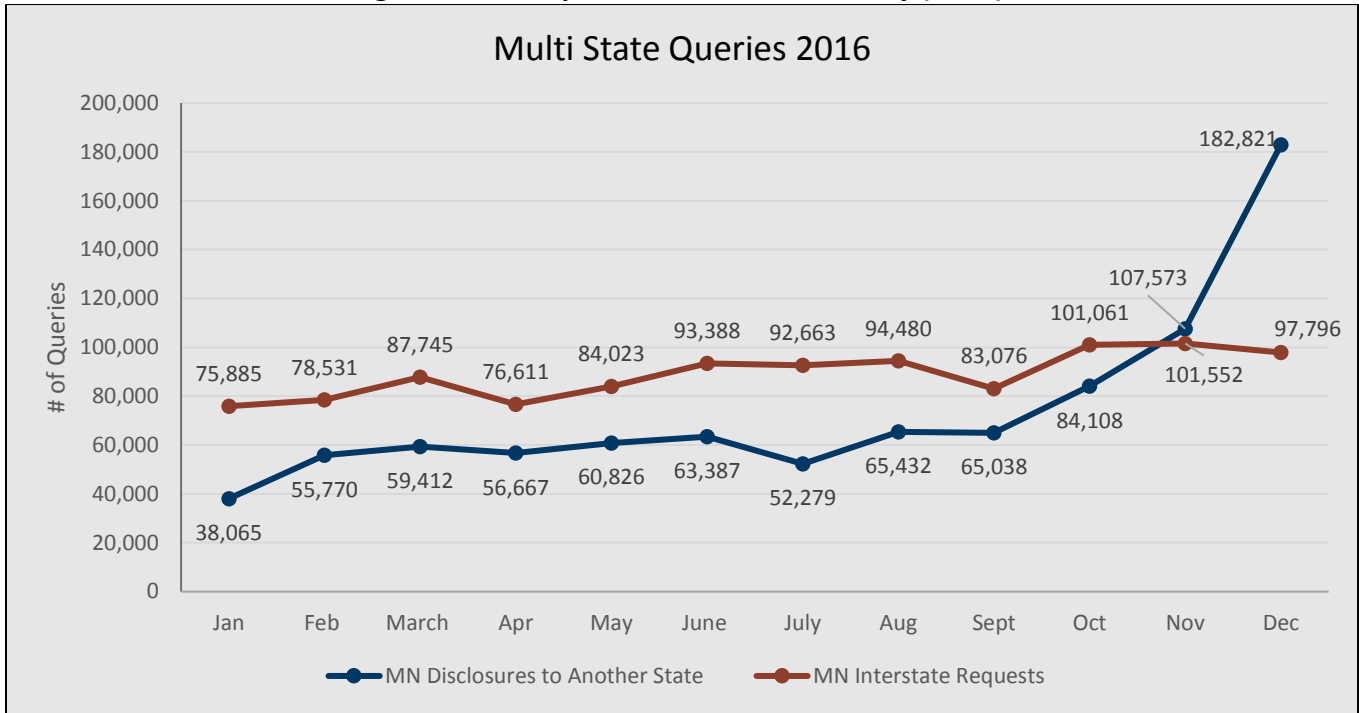
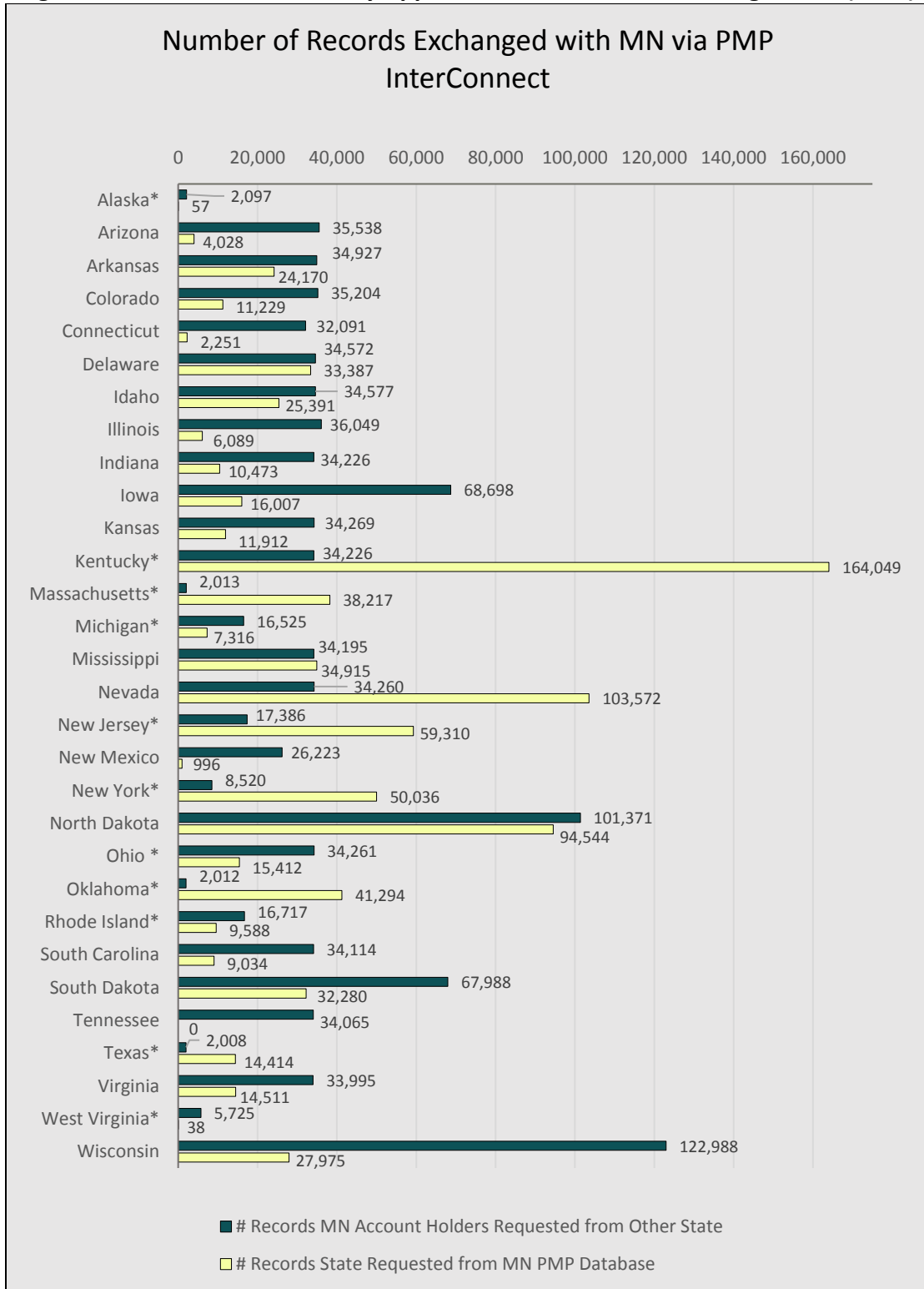


Figure 15 reflects the volume of queries requested by MN account holders to the PMP’s in other states, compared to the volume of MN database queries requested by other state’s PMP account holders. States that border MN are exchanging data frequently. This information exchange is important for capturing data on individuals who receive prescriptions dispensed across borders. These numbers rise as more states are added to the PMP InterConnect and MN establishes connections with other states. Note that the following state connections occurred during 2016: Rhode Island (July), New York (October), Alaska (December), Massachusetts (December), Oklahoma (December), Texas (December).

**Figure 15. Queries Performed by Approved Account Holders through PMPi (2016)**



## Key to Abbreviations

**APAP:** Acetaminophen, the generic of Tylenol®

**APRN:** Advanced Practice Registered Nurse

**DDS:** Doctor of Dental Surgery

**DO:** Doctor of Osteopathy

**DMD:** Doctor of Medicine in Dentistry

**DPM:** Doctor of Podiatric Medicine

**MD:** Medical Doctor

**ME/Coroner:** Medical Examiner/Coroner

**MRRP:** Minnesota Restricted Recipient Program

**OD:** Doctor of Optometry

**PA:** Physician Assistant

**RPh:** Pharmacist

**RX:** Prescription

**VET:** Veterinarian

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<http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?src=bkml>.
2. **McEvoy, G., Snow, E., Miller, J. et al, [ed.]**. AHFS Drug Information 2016. Bethesda : American Society of Health-System Pharmacists(R), 2016.