



## Controlled Substances Board



**WISCONSIN** | **ePDMP**

### Report 7

## 2018 Quarter 4 and Year-End Summary

# Contact Information

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## Wisconsin Controlled Substances Board

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Bloom, Alan, Vice Chairperson	Pharmacologist
Bellay, Yvonne M., Secretary	Department of Agriculture, Trade and Consumer Protection Designated Member
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# Introduction

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This report is being provided pursuant to ss. 961.385 (5) – (6), Wis. Stats., which requires the Controlled Substances Board (CSB) to submit a quarterly report to the Wisconsin Department of Safety and Professional Services (DSPA) about the Wisconsin Prescription Drug Monitoring Program (PDMP). This report is intended to satisfy that requirement for the fourth quarter of 2018.

The WI PDMP was first deployed in June 2013. It is administered by DSPS pursuant to the regulations and policies established by the CSB. An enhanced system, the WI ePDMP, was launched on January 17, 2017, allowing the WI PDMP to become a multi-faceted tool in Wisconsin's efforts to address prescription drug abuse, misuse, and diversion through clinical decision support, prescribing practice assessment, communication among disciplines, and public health surveillance. Effective April 1, 2017, prescribers are required to check the WI ePDMP prior to issuing a prescription order for a monitored prescription drug, defined as controlled substance prescription drugs in Schedules II-V.

The WI ePDMP Public Statistics Dashboard (<https://pdmp.wi.gov/statistics>) provides interactive data visualizations for much of the data contained in this report, including the ability to obtain county-level detail.

## User Satisfaction

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A WI ePDMP user satisfaction survey was conducted in April 2018, and detailed results of the survey were provided in the Q2 2018 report. In brief, the survey was sent to approximately 30,000 registered healthcare professionals and had responses from over 6,000 users, a response rate of 20%. The survey indicated that most users are satisfied with the WI ePDMP, with 77% percent of respondents providing responses of either "Satisfied" or "Very Satisfied."

Ideas proposed in the WI ePDMP survey responses helped inform a follow-up survey, scheduled for January 2019. The 2019 user survey solicits feedback about specific enhancements and will also be used to identify focus group participants. Priorities and details collected from the focus groups will then determine future enhancements for the WI ePDMP and will be included in future reports.

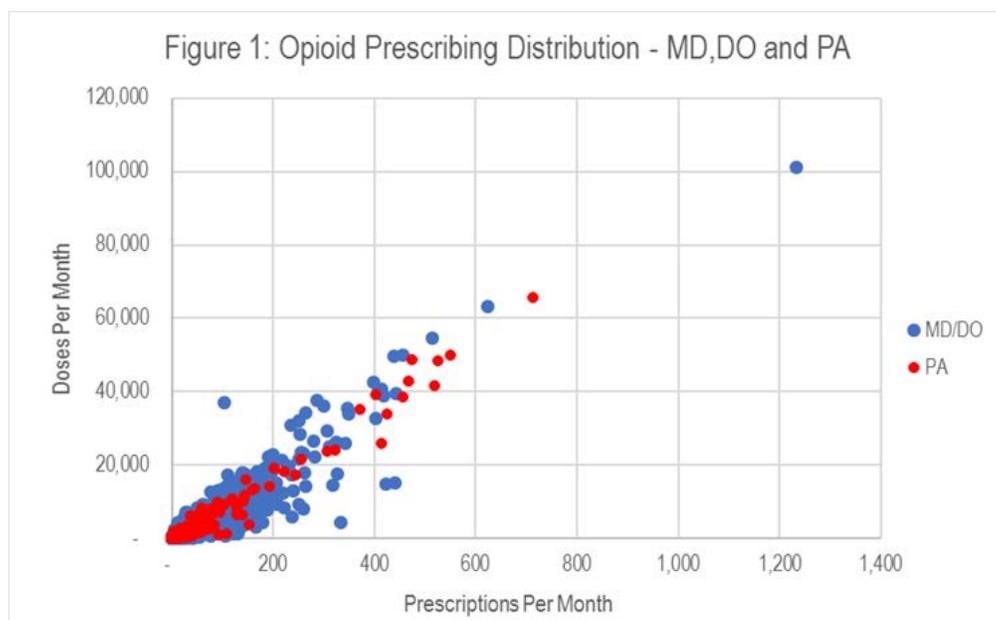
## Impact on Referrals for Investigation

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Pursuant to s. 961.385 (2) (f) and (3) (c), Wis. Stats., the CSB may refer to the appropriate licensing or regulatory board for discipline a pharmacist, pharmacy, or practitioner who fails to comply with the rules of the Prescription Drug Monitoring Program and may disclose PDMP data to relevant state boards and agencies if circumstances indicate suspicious or critically dangerous conduct or practices of a pharmacy, pharmacist, practitioner, or patient. In 2018, the CSB Referral Criteria Workgroup developed recommendations for how the CSB could define suspicious or critically dangerous conduct or practices and presented their recommendations to the full Board.

Based on the recommendations, the Wisconsin Medical Examining Board (MEB), Dentistry Examining Board (DEB), and Board of Nursing (BON) received summaries of the PDMP dispensing data specific to their professions at their August and September 2018 meetings. The data focused on opioid dispensing volume for the six-month time period of December 1, 2017 through May 31, 2018.

The data presented to the MEB resulted in the referral of the top seven physician prescribers based on opioid dispensing volume out of the approximately 15,000 opioid prescribers in the profession. The initial report presented to the MEB did not include physician assistant (PA) prescribers, so an updated report including all physician and PA prescribers was produced, which resulted in the referral of seven PAs. Figure 1 below plots the distribution of physician and PA prescribers, based on the average number of opioid prescriptions per month and the average number of opioid doses per month for the six-month period.



The data presented to the DEB resulted in the referral of the top four dentistry prescribers based on opioid dispensing volume out of the approximately 3,000 opioid prescribers in the profession. Recognizing that opioid prescribing by dentists is unique and often falls within the exception to the requirement to review patient data in the PDMP for prescriptions lasting three days or less, the DEB also considered the WI ePDMP usage for prescribers who had prescriptions for an estimated duration of over three days. Among the highest 1% of opioid prescribers in the profession, those who had written prescriptions for over three days but who had no indication of use of the WI ePDMP were also identified, which resulted in the referral of an additional 12 licensees.

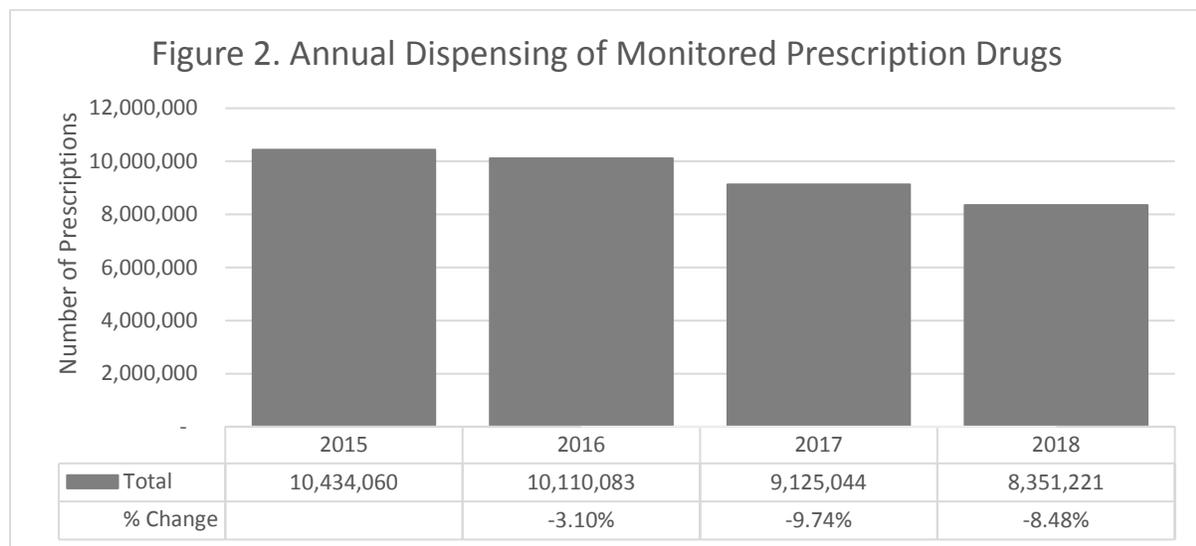
The data presented to the BON resulted in the referral of the top four Advanced Practice Nurse Prescribers (APNP) based on opioid dispensing volume out of the approximately 3,700 APNPs who prescribed opioids during the six-month time period of the report. The BON further requested additional targeted outreach for APNPs with an estimated WI ePDMP usage of less than 50% to educate these prescribers about the use of the PDMP and the tools available in the PDMP that can help promote safe

prescribing practices. The request generated over 800 outreach letters, which were sent at the end of Q4 2018.

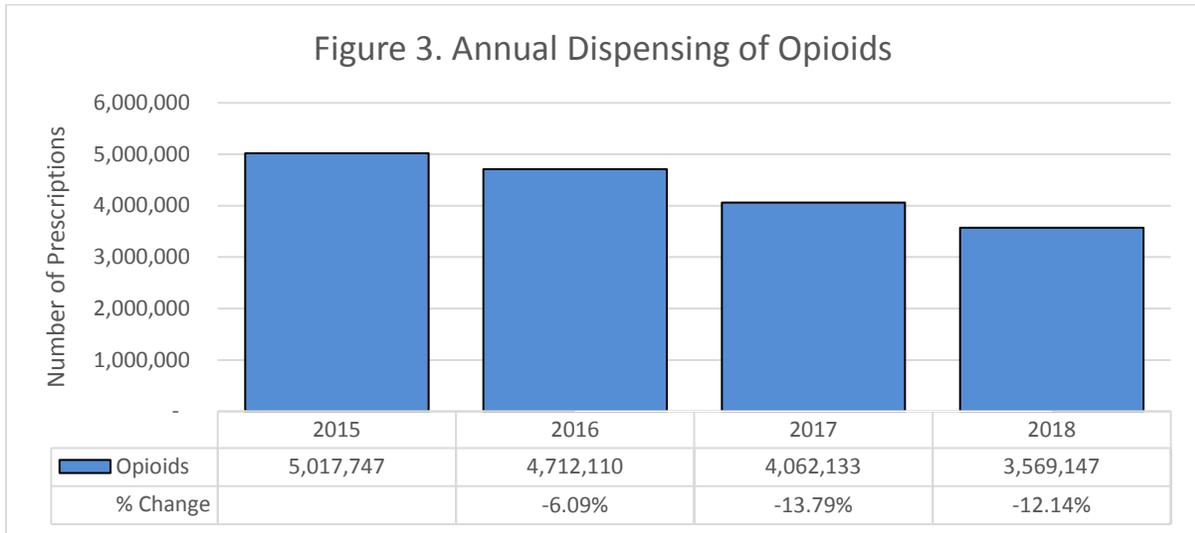
The investigation of the referred prescribers is ongoing, with letters issued to the medical, dentistry, and nursing licensees at the end of Q4 2018 or scheduled to be issued in Q1 2019. The DSPS Division of Legal Services and Compliance expects responses from all referred licensees, which will provide details to further the investigations. Results of the investigations will help inform the CSB’s referral process going forward.

## Monitored Prescription Drug Dispensing Trend

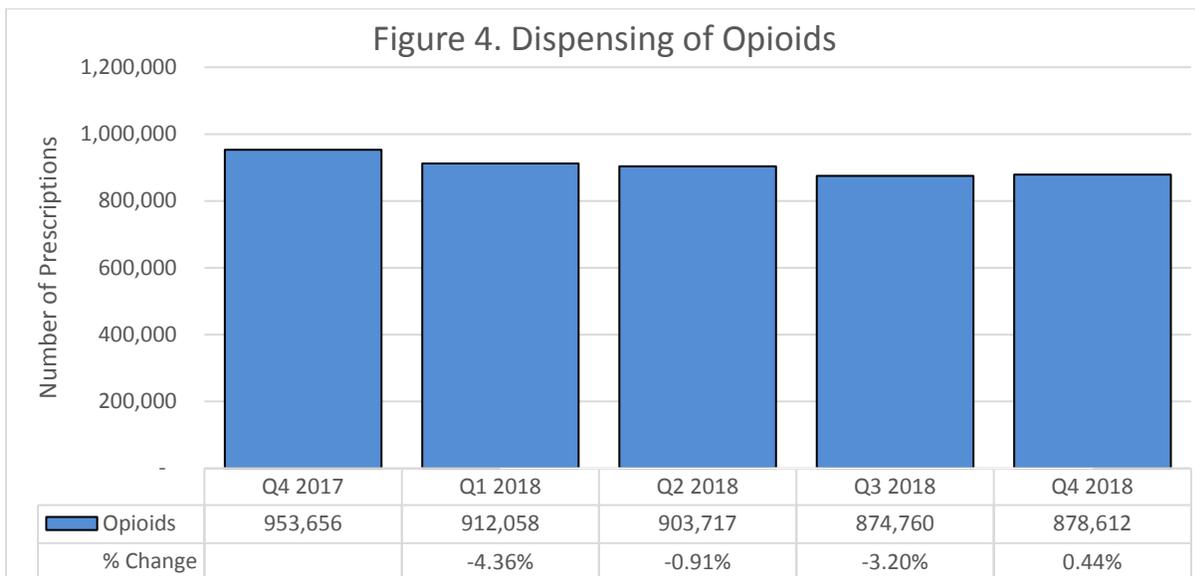
The total annual amount of monitored prescription drugs dispensed in Wisconsin has declined 20% from 2015 to 2018, a difference of over 2,080,000 prescriptions. Figure 2 shows the continued decrease, with both 2017 and 2018 having the most significant declines in the past 4 years. These significant decreases coincide with the timing of some of the State’s most concerted efforts to address the opioid epidemic, including controlled substance prescribing guidelines, requirements for prescribers to have additional education on opioid prescribing, mandatory use of the WI PDMP, and enhancements to the WI PDMP system.



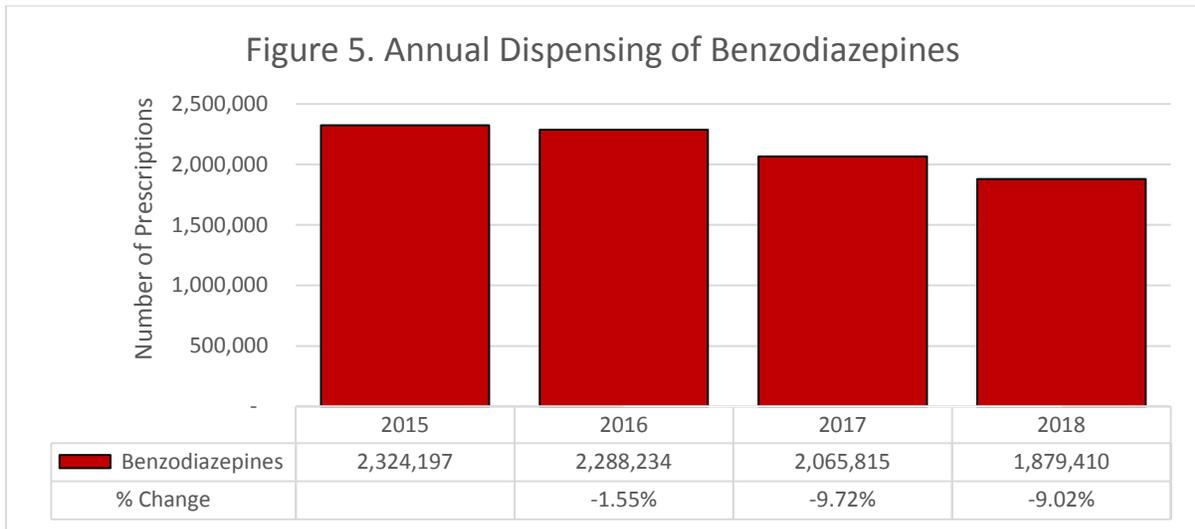
When evaluating the annual total number of dispensings of specific drug classes of monitored prescription drugs from 2015 to 2018, there has been a 29% decrease in opioid dispensing from 2015 to 2018, a difference of over 1,448,000 prescriptions. The most significant decline of 14% occurred in 2017, just slightly higher than the 2018 decrease of 12%, as shown in Figure 3.



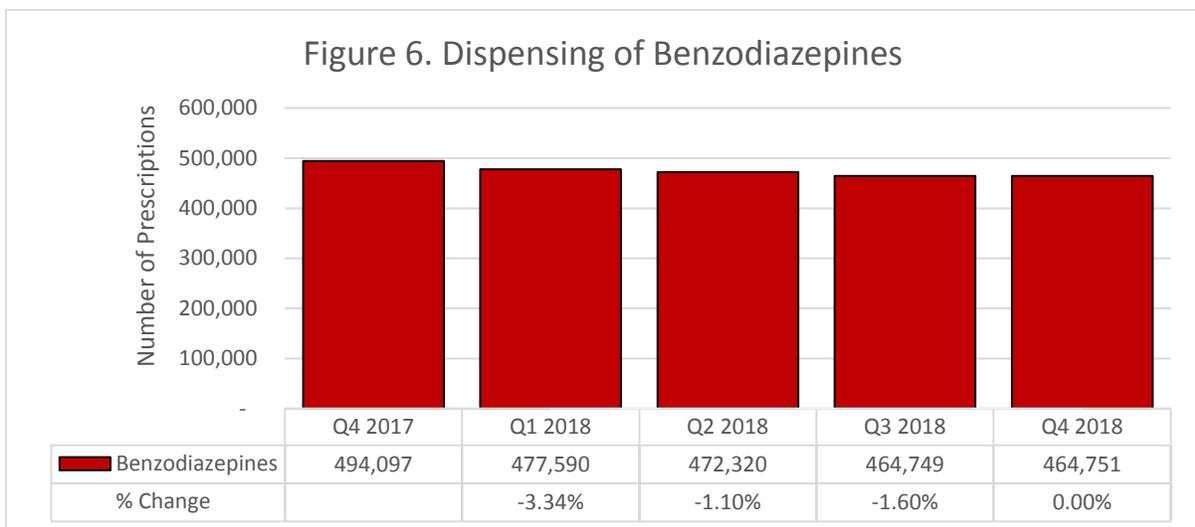
When considering the dispensing of monitored prescription drugs during 2018 by quarter, the most significant decrease for opioid dispensing occurred in Q1 2018, with minimal change in Q4 2018, as shown in Figure 4. Overall, the number of opioid prescription dispensings in Q4 2018 decreased by 8% when compared to the number of dispensings in Q4 2017. The number of opioid prescriptions dispensed in Q4 2018 was 3,569,147 prescriptions, which is 32%, lower than the number of opioid prescriptions dispensed in Q1 2015 – the highest quarter for opioid prescription dispensing in the past four years.



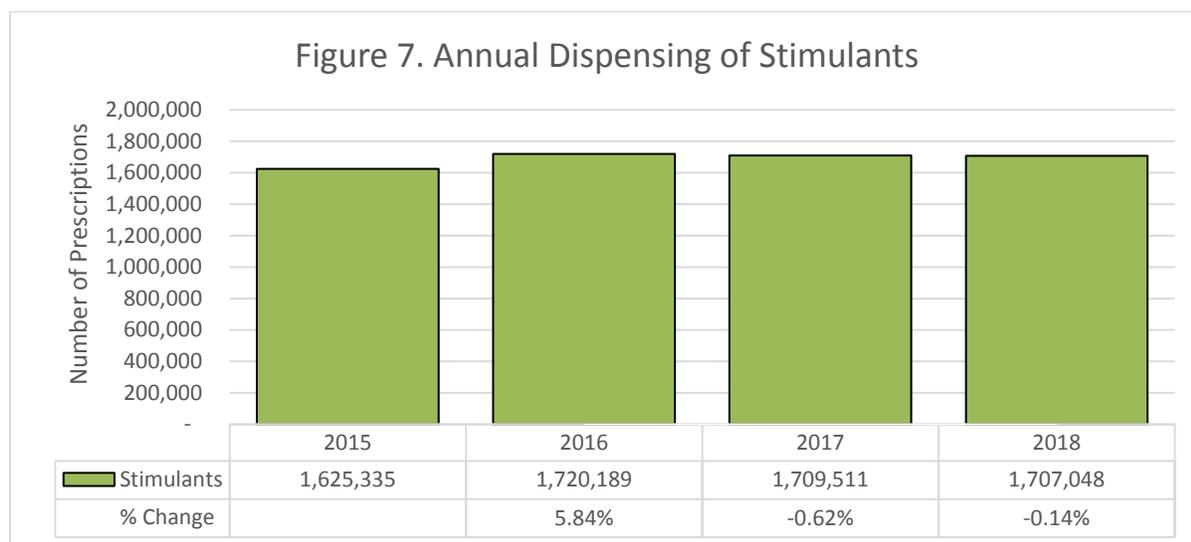
Benzodiazepine dispensing decreased by over 444,700 prescriptions, or 19%, from 2015 to 2018, with the most significant declines of 10% and 9% occurring in 2017 and 2018, respectively, as shown in Figure 5.



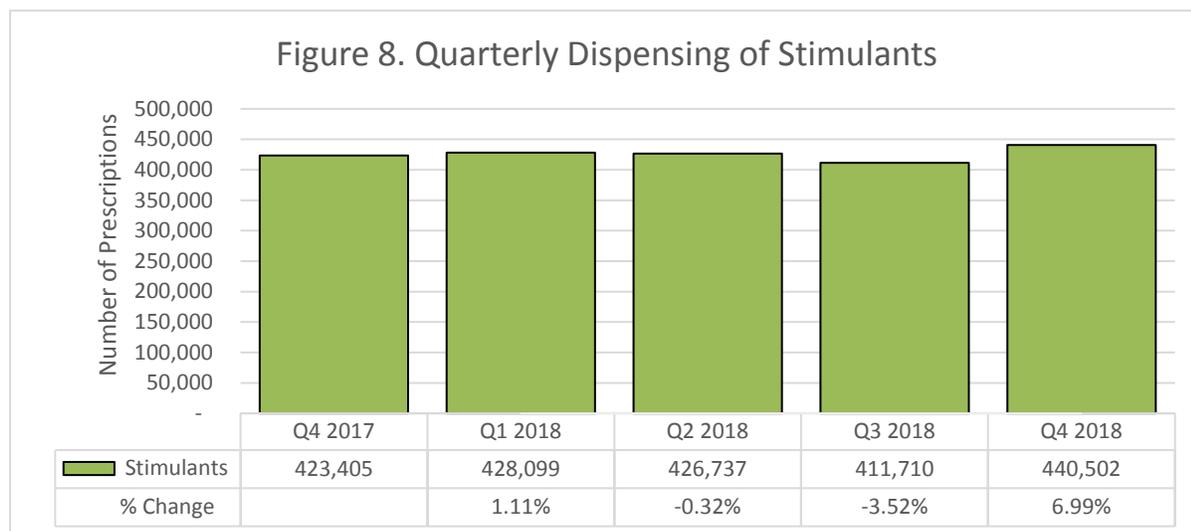
Similar to the quarterly trends noted for opioids, the most significant quarterly decrease for benzodiazepine dispensing occurred in Q1 2018, with minimal change in Q4 2018, as shown in Figure 6. Overall, the number of benzodiazepine prescriptions dispensed in Q4 2018 decreased by 6% when compared to the number of dispensings in Q4 2017.



Consistent with dispensing trends occurring at the national level, the dispensing of stimulants increased between 2015 and 2018 by over 81,700 prescriptions, or 5%. As shown in Figure 7, the increase primarily occurred in 2016, with minimal change to the overall dispensing of stimulants in both 2017 and 2018.



In 2018, the dispensing of stimulants fluctuated between increased dispensing in Q1 and Q4, then decreased dispensing in Q2 and Q3, which is consistent with quarterly dispensing trends from previous years. As shown in Figure 8, the most notable increase of 7% occurred in Q4 2018, which accounted for much of the overall annual increase of 4% when compared to the number of stimulant prescription dispensed in Q4 2017.



## Top 15 Dispensed Monitored Prescription Drugs

A noteworthy change to the 15 most dispensed monitored prescription drugs was highlighted in Q3 2018. Acetaminophen with Codeine was surpassed by Buprenorphine HCl-Naloxone HCl Dihydrate (Suboxone®) as the 15<sup>th</sup> most dispensed monitored prescription drug. This was noteworthy for two reasons. First, previous years had not shown any change to the drugs that fall under the 15 most dispensed monitored prescription drugs. Second, buprenorphine products are one of three FDA approved medications utilized to treat opioid use disorder as part of Medication-Assisted Treatment (MAT).

Not only has Buprenorphine HCl-Naloxone HCl Dihydrate remained in the top 15 monitored prescription drugs dispensed in Q4 2018, but there was also a 10% increase in dispensing from Q3 2018 to Q4 2018. This is representative of Buprenorphine HCl-Naloxone HCl Dihydrate that is dispensed by a pharmacy and does not include dispensings that occur at an opioid treatment program due to federal regulation 42 CFR Part 2, which prohibits federally funded opioid treatment programs from submitting dispensing data to state PDMPs.

Another notable change that occurred in 2018 is that the top five monitored prescription drugs dispensed no longer included Oxycodone HCl, resulting in only two opioids in the top five monitored prescription drugs.

Table 1 shows the top 15 most dispensed monitored prescription drugs in Q4 2018 compared to Q3 2018, ranked in order of the number of prescriptions dispensed in Q4 2018. The top 15 monitored prescription drugs dispensed make up almost 88% of the dispensing records for any given quarter.

	<b>Drug Name</b>	<b>Drug Class</b>	<b>Q4 2018 Dispensing</b>	<b>Q3 2018 Dispensing</b>	<b>Percent Change</b>
1	Hydrocodone-Acetaminophen	Opioid	291,570	291,990	-0.1%
2	Amphetamine-Dextroamphetamine	Stimulant	203,054	195,811	3.7%
3	Tramadol HCl	Opioid	173,385	173,433	-0.03%
4	Lorazepam	Benzodiazepine	145,444	145,357	0.1%
5	Alprazolam	Benzodiazepine	141,635	141,650	-0.01%
6	Oxycodone HCl	Opioid	139,873	136,760	2.3%
7	Clonazepam	Benzodiazepine	121,287	120,946	0.3%
8	Zolpidem Tartrate	Other	116,571	116,097	0.4%
9	Methylphenidate HCl	Stimulant	100,589	90,497	11.2%
10	Lisdexamfetamine Dimesylate	Stimulant	98,069	89,695	9.3%
11	Oxycodone w/ Acetaminophen	Opioid	94,529	93,862	0.7%
12	Pregabalin	Other	61,558	60,395	1.9%
13	Diazepam	Benzodiazepine	49,857	49,514	0.7%
14	Morphine Sulfate	Opioid	45,087	45,516	-0.9%
15	Buprenorphine HCl-Naloxone HCl Dihydrate	Opioid	43,122	39,374	9.5%

Table 2 below shows the top 15 most dispensed monitored prescription drugs in Q4 2018 compared to Q3 2018, ranked in order of total quantity of pills, or doses, dispensed in Q4 2018, rather than number of prescription orders filled.

Buprenorphine HCl-Naloxone HCl Dihydrate surpassed Acetaminophen with Codeine in Q4 2018 as the 15<sup>th</sup> top dispensed monitored prescription drugs when measured by total quantity of pills, or doses, dispensed.

<b>Table 2: Top 15 Dispensed Monitored Prescription Drug by Pill (Dose) Volume</b>					
	<b>Drug Name</b>	<b>Drug Class</b>	<b>Q4 2018 Pill (Dose)</b>	<b>Q3 2018 Pill (Dose)</b>	<b>Percent Change</b>
1	Hydrocodone-Acetaminophen	Opioid	14,965,935	15,012,191	-0.3%
2	Tramadol HCl	Opioid	11,682,290	11,761,855	-0.7%
3	Oxycodone HCl	Opioid	9,827,267	9,916,310	-0.9%
4	Amphetamine-Dextroamphetamine	Stimulant	9,614,784	9,343,160	2.9%
5	Alprazolam	Benzodiazepine	7,833,691	7,877,611	-0.6%
6	Clonazepam	Benzodiazepine	6,897,058	6,820,059	1.1%
7	Lorazepam	Benzodiazepine	6,584,221	6,598,163	-0.2%
8	Oxycodone w/ Acetaminophen	Opioid	6,165,772	6,201,914	-0.6%
9	Pregabalin	Other	4,563,222	4,440,822	2.8%
10	Methylphenidate HCl	Stimulant	4,543,997	4,183,438	8.6%
11	Zolpidem Tartrate	Other	3,900,323	3,877,500	0.6%
12	Lisdexamfetamine Dimesylate	Stimulant	3,061,118	2,807,524	9.0%
13	Morphine Sulfate	Opioid	2,556,091	2,626,289	-2.7%
14	Diazepam	Benzodiazepine	1,953,973	1,956,016	-0.1%
15	Buprenorphine HCl-Naloxone HCl Dihydrate	Opioid	1,365,001	1,281,850	6.5%

# Data-Driven Alerts

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The WI ePDMP application uses sophisticated data analytics to assess a patient's monitored prescription drug history. Analytics are performed on the patient's prescription history to identify and alert WI ePDMP users to potential indications of abuse, diversion, or overdose risk, such as high morphine milligram equivalent doses, overlapping benzodiazepine and opioid prescriptions, and multiple prescribers or dispensers. Data-driven alerts are presented on the patient report as way to call attention to specific detail from the dispensing data.

The 6 types of data-driven concerning patient history alerts are:

1. **Multiple Prescribers or Pharmacies Alert**, which indicates that the patient has obtained prescriptions from at least 5 prescribers or 5 pharmacies within the previous 90 days. The 5 prescribers or dispensers may be associated with the same clinic, practice or location, but the WI ePDMP still views them as separate prescribers/dispensers. This alert is not a direct indication of doctor shopping; it is simply a flag for further inspection of the dispensing history.
2. **Long-Term Opioid Therapy with Multiple Prescribers Alert**, which indicates when a patient has been prescribed at least 1 opioid prescription from 2 or more prescribers for 90 or more days.
3. **Early Refill Alert**, which indicates when a patient has refilled a controlled substance prescription 2 or more days earlier than the expected refill date based on the estimated duration of the prescription calculated and reported by the pharmacy.
4. **High Current Daily Dose of Opioids Alert**, which indicates when a patient's active current prescriptions are estimated to provide a daily dose of opioids that exceeds 90 morphine milligram equivalent (MME), thereby increasing the patient's risk of overdose.
5. **Concurrent Benzodiazepine and Opioid Prescription Alert**, which indicates when a patient's active current prescriptions include both an opioid and a benzodiazepine, a combination that significantly increases the patient's risk of overdose.
6. **Multiple Same Day Prescriptions Alert**, which indicates when a patient has received the same controlled substance drug from multiple prescribers or pharmacies on the same day.

Overall, there was a 34% reduction in the number of concerning patient history alerts generated by analytics of the dispensing data from Q1 2017, when the alerts were first available in the WI ePDMP, to Q4 2018. Specifically, alerts for Multiple Same Day Prescriptions decreased by 66%, and alerts for Multiple Prescribers or Pharmacies decreased by 44%. Both of these alerts may be an indication of "doctor shopping." High Opioid Daily Dose alerts decreased by 37%, and Concurrent Benzodiazepine and Opioid alerts decreased by 28%. See Table 3 for detail on the overall volume of alerts by alert type as well as the percent change that occurred from Q1 2017 to Q4 2018.

Table 3: Concerning Patient History Alerts Listed by Volume of Alerts Generated in Q4 2018				
	Alert Type	Q4 2018	Q1 2017	Percent Change
1	Concurrent Benzodiazepine and Opioid	27,742	38,446	-28%
2	High Opioid Daily Dose	25,094	40,005	-37%
3	Long Term Opioid Therapy	23,588	34,819	-32%
4	Early Refill	17,988	24,354	-26%
5	Multiple Prescribers or Pharmacies	13,645	24,379	-44%
6	Multiple Same Day Prescriptions	1,038	3,009	-66%
	<b>All Alert Types</b>	<b>109,095</b>	<b>165,012</b>	<b>-34%</b>

A significant reduction in almost all alert types occurred in Q3 2017, the first full quarter after the requirement for prescribers to check the WI ePDMP prior to issuing a prescription order for a monitored prescription drug went into effect. Depending on the alert type, most alerts showed a second significant decrease in either Q1 2018 (Concurrent Benzodiazepine and Opioid and Early Refill) or Q2 2018 (High Opioid Daily Dose, Long Term Opioid Therapy, and Multiple Prescribers or Pharmacies). The Multiple Same Day Prescriptions alert is the one exception as that alert type had the most significant declines in Q2 2017 and Q3 2018.

When evaluating the reduction in alerts from Q3 2018 to Q4 2018, alerts decreased by 1-4% from the previous quarter. See Figures 9–14 for detail on each alert type by quarter.

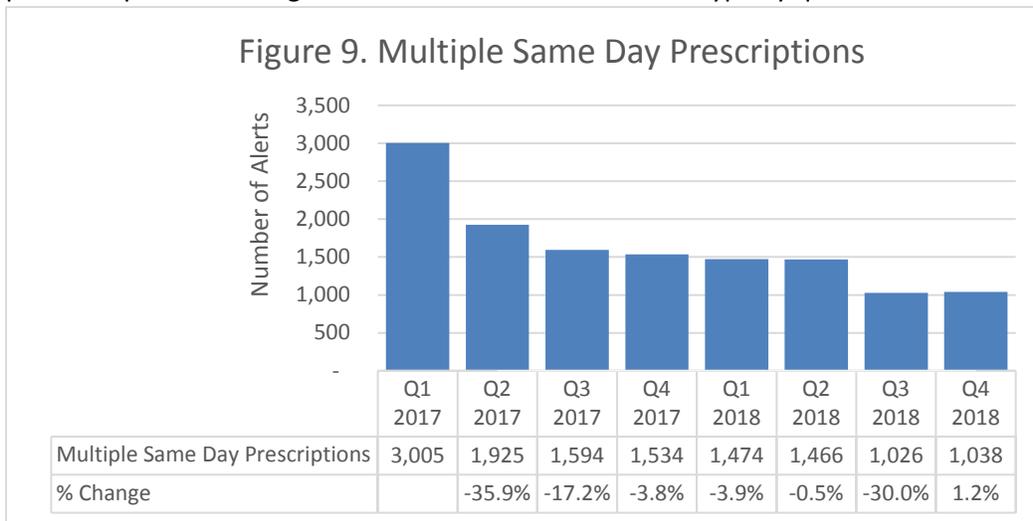


Figure 10. Multiple Prescribers Or Pharmacies



Figure 11. High Opioid Daily Dose

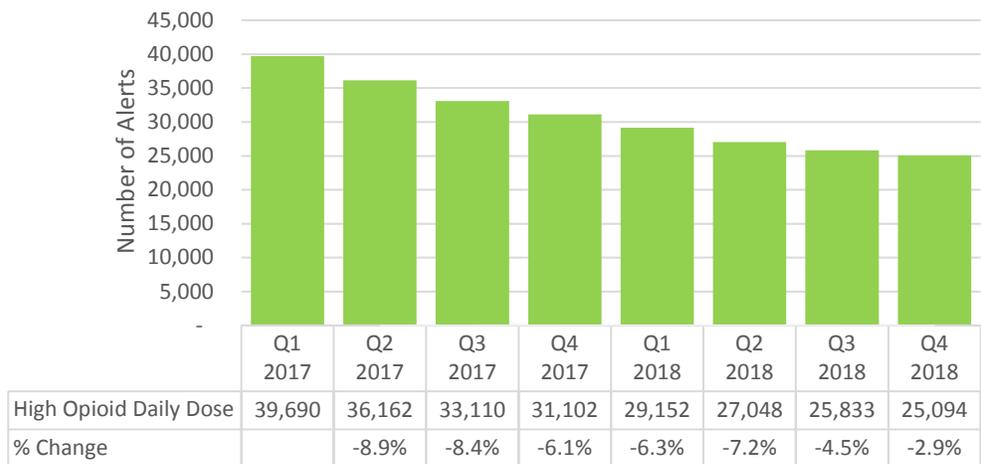


Figure 12. Long Term Opioid Therapy

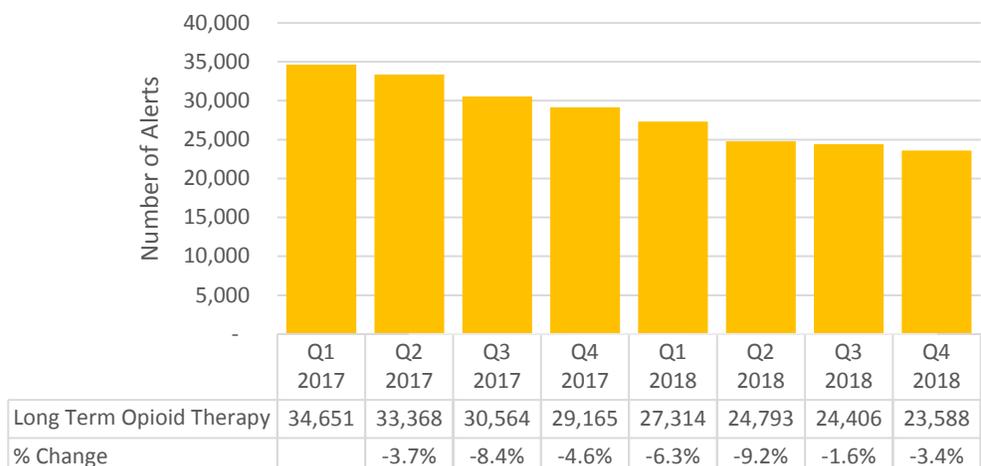


Figure 13. Concurrent Benzodiazepine and Opioid

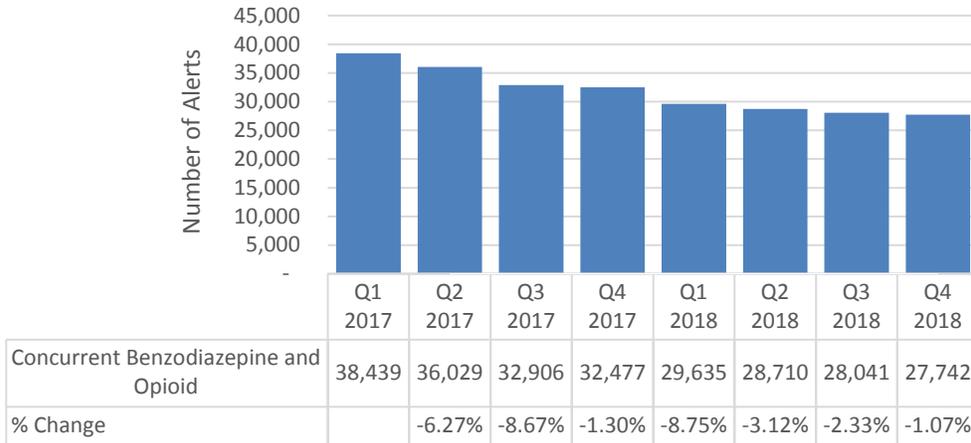
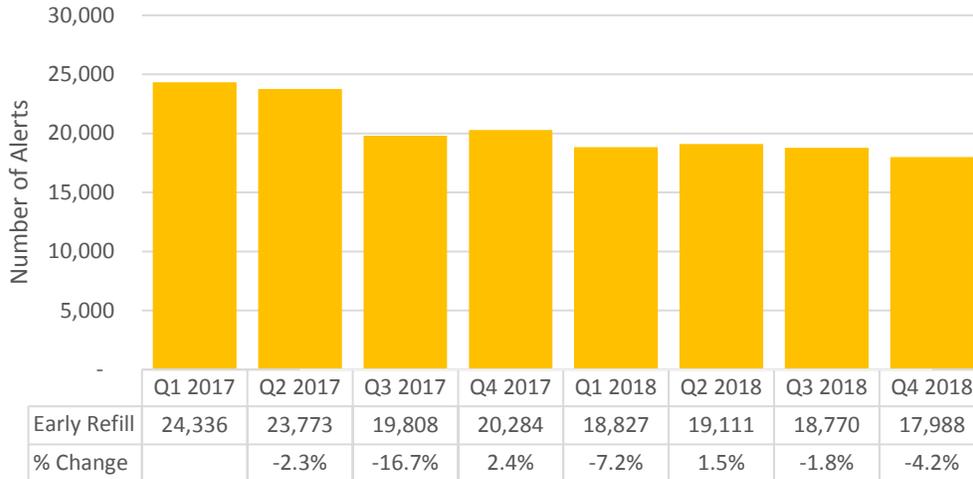


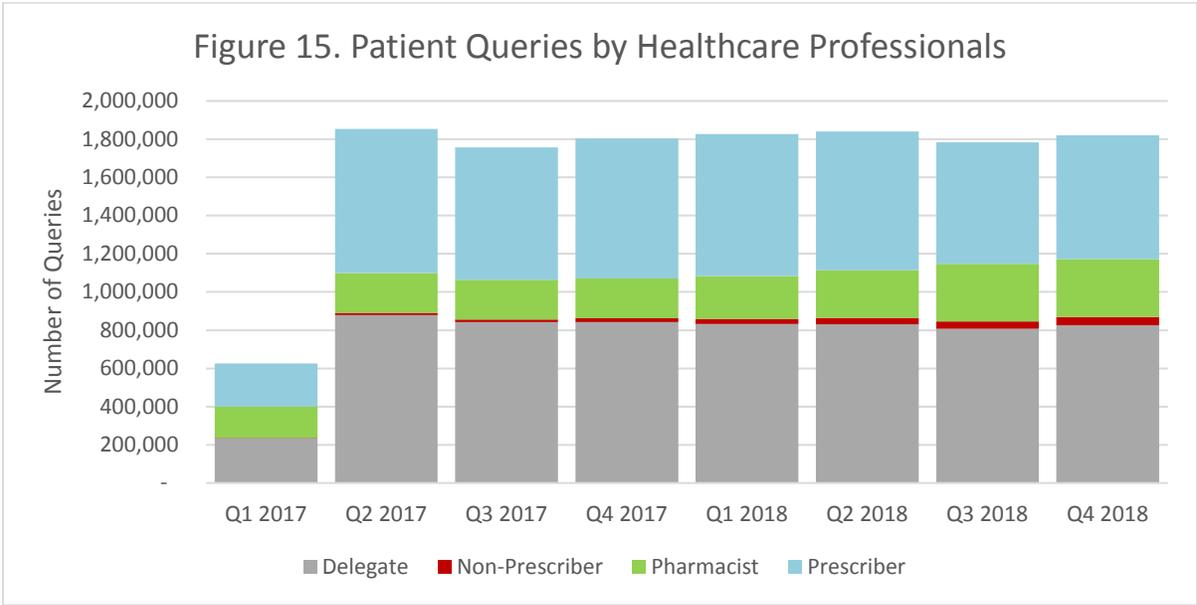
Figure 14. Early Refill



# Disclosure of PDMP Data

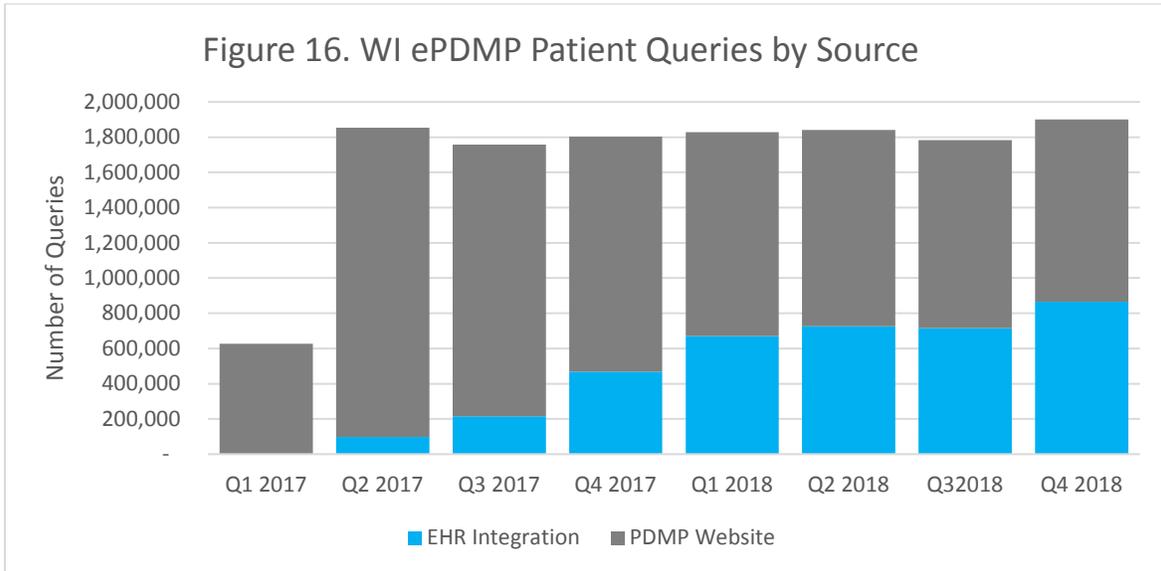
In 2018, healthcare users made over 7.2 million patient queries in the WI ePDMP. This is 1.2 million queries more than in 2017 or a 20% increase. The most significant increase occurred in Q2 2017, which coincided with the requirement for prescribers to review patient records in the PDMP going into effect. The number of patient queries has remained consistently high since then, with around 600,000 queries per month.

Breaking down the queries by user type shows that 45% of the queries were performed by delegates of prescribers or pharmacists, 38% were performed by prescribers, 15% by pharmacists, and 2% by other non-prescribing healthcare professionals, such as substance abuse counselors. See Figure 15 for quarterly data of patient queries performed by healthcare professionals.

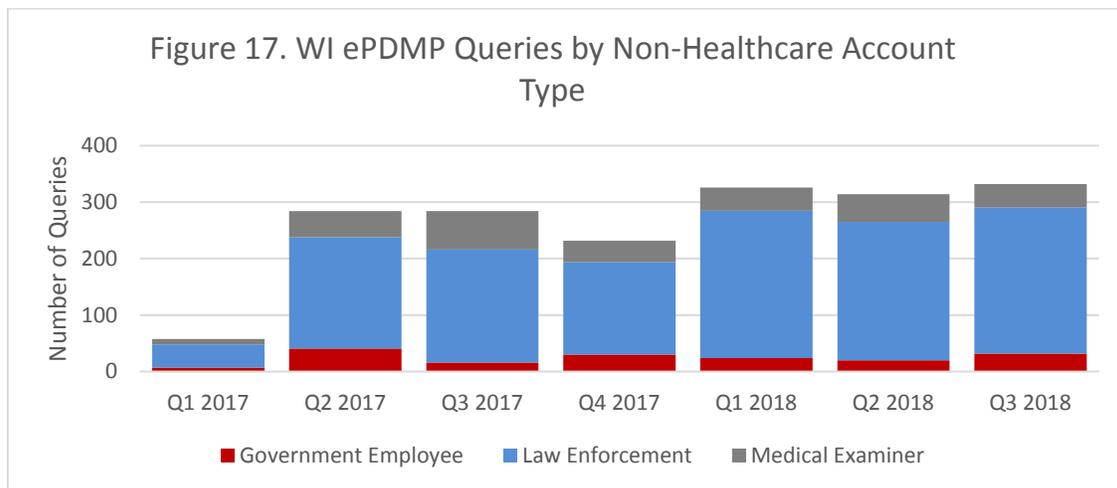


The WI ePDMP is currently connected to 15 other state PDMPs via the National Association of Boards of Pharmacy’s PMP InterConnect. This allows healthcare users to expand the WI ePDMP patient query to return results from other state’s PDMP, including border states such as Minnesota, Michigan, Illinois, Iowa and Indiana.

As of December 31, 2018, healthcare professionals from fourteen health systems in Wisconsin have one-click access to the PDMP from within their EHR platform. In Q4 2018, 45% of patient queries were through the direct EHR integration, a 5% increase from Q3 2018.



Authorized individuals from non-healthcare groups made a total of 1,353 requests for PDMP data in 2018. In Q4 2018, 381 requests were made for PDMP reports, an increase of 15% over the previous quarter.

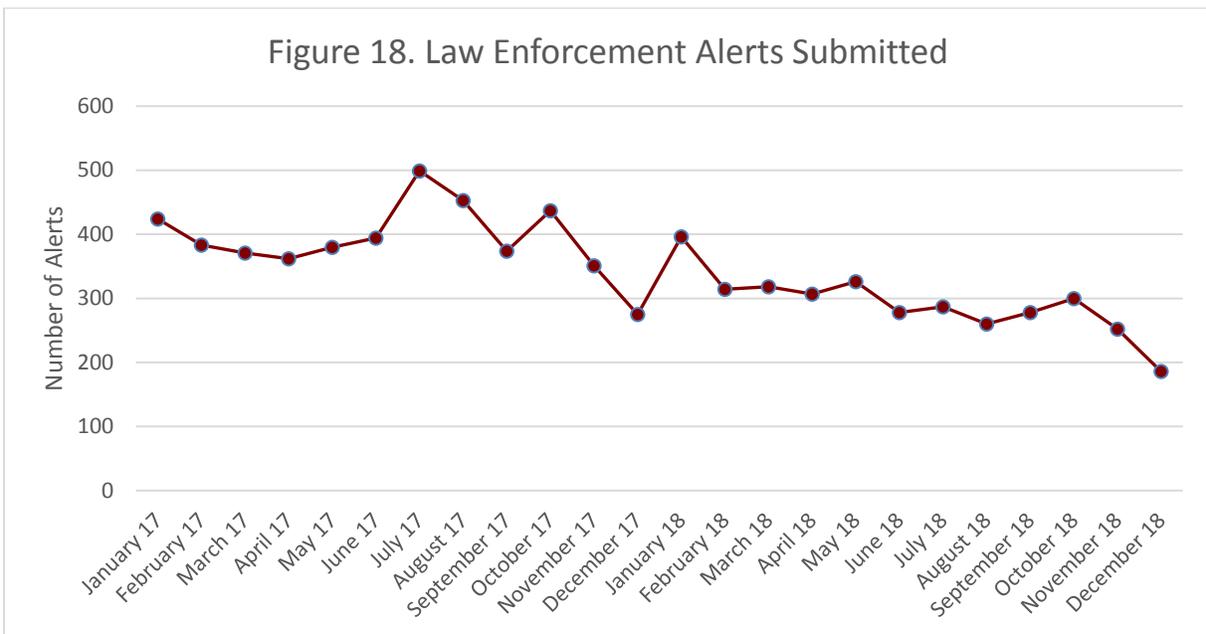


# Law Enforcement Reports

During 2018 there were 3,502 events reported to the WI ePDMP by Wisconsin law enforcement agencies as required by s. 961.37 (3) (a), Wis. Stat. The law requires the agencies to submit a report in each of the following situations:

1. When a law enforcement officer receives a report of a stolen controlled substance prescription.
2. When a law enforcement officer reasonably suspects that a violation of the Controlled Substances Act involving a prescribed drug is occurring or has occurred.
3. When a law enforcement officer believes someone is undergoing or has immediately prior experienced an opioid-related drug overdose.
4. When a law enforcement officer believes someone died as a result of using a narcotic drug.

Prescribers of patients associated with these events receive a proactive email notice from the WI ePDMP, in addition to the event being captured as an alert on the patient report in the WI ePDMP. Figure 18 shows the number of law enforcement reports submitted to the WI ePDMP by month for the past two years. There is no statutory requirement for law enforcement agencies to submit their reports within a certain timeframe after the date of the event, so the numbers for the late months of 2018 may continue to increase in the coming months.



In 2018 the distribution of submission by report type remains consistent with the 2017 report type distribution:

- 39% of the reports submitted were reports of stolen controlled substance prescriptions
- 26% of the reports submitted were suspected violations of the Controlled Substances Act
- 31% of the reports submitted were suspected non-fatal opioid-related overdose events, and
- 4% of the reports submitted were suspected narcotic-related deaths.

# Summary

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Year-end data from the WI ePDMP in 2018 confirm a continued decline in the number of monitored prescription drugs being dispensed in Wisconsin over the past three years. These significant decreases coincide with the timing of some of the State's most concerted efforts to address the opioid epidemic, including controlled substance prescribing guidelines, requirements for prescribers to have additional education on opioid prescribing, mandatory use of the WI PDMP, and enhancements to the WI PDMP system.

Controlled substance prescription dispensings in 2018 compared to 2015 show the following trends:

- 20% decrease in the total number of monitored prescription drugs dispensed, over 2 million fewer prescriptions
  - 29% decrease in the number of opioid prescriptions dispensed in the past three years, almost 1.5 million fewer prescriptions
  - 19% decrease in the number of benzodiazepine prescriptions dispensed in the past three years, over 444,000 fewer prescriptions
  - There has been no increase in the number of stimulant prescriptions dispensed since 2016, yet overall annual dispensing of stimulant prescriptions remains 5% higher than 2015 dispensing

The WI ePDMP uses data-driven alerts to call attention to potential concerning patient activity. Data-driven alerts became available in January of 2017 as part of the WI ePDMP patient report to assist the healthcare professionals accessing the system. The frequency of alert generation has declined quarter over quarter for the past two years.

Data-driven alerts in Q4 2018 compared to Q1 2017 show the following declines:

- 34% decrease in the total number of data-driven alerts generated by the WI ePDMP
  - 66% decrease in the number of alerts for multiple same day prescriptions in the past two years
  - 44% decrease in the number of alerts for multiple prescribers or pharmacies in the past two years
  - 37% decrease in the number of alerts for high opioid daily dose in the past two years
  - 28% decrease in the number of alerts for concurrent benzodiazepine and opioid prescriptions in the past two years

Data show increased dispensing of Buprenorphine HCl-Naloxone HCl Dihydrate in 2018:

- Buprenorphine HCl-Naloxone HCl Dihydrate (Suboxone®) became the 15<sup>th</sup> top monitored prescription drug dispensed in Wisconsin in both Q3 and Q4 of 2018, surpassing Acetaminophen with Codeine. Buprenorphine products are one of three medications commonly used as part of Medication-Assisted Treatment (MAT) for opioid use disorder.