Maine Department of Health & Human Services
Office of Behavioral Health

# Prescription Monitoring Program Annual Report 2021

Maine Prescription Monitoring Program

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## Introduction

For nearly 20 years, Maine's prescription drug monitoring program (PMP) has functioned as a primary prevention tool in our state's battle to combat substance misuse, addiction, and overdose. By tracking all controlled substances dispensed at retail pharmacies across the state of Maine and exchanging this data with other states, the PMP has substantially reduced inappropriate opioid prescribing, virtually eliminated "doctor-shopping" and pill mills, and built the capacity to allow clinicians access to critically important patient prescription history at the point of care.

Opioid prescribing has significantly decreased since the PMP was established in 2003; at the same time, prescribing of medications to treat Opioid Use Disorders has increased dramatically. Dangerous overlap between benzodiazepine and opioid prescriptions has decreased. Nearly all states are now either currently or in the process of reciprocally sharing PMP data with Maine. The Office of Behavioral Health (OBH) has implemented several new PMP analytic and the Department has allocated significant resources towards leveraging the PMP as a public health improvement, intervention, and outreach mechanism with the goal of fully realizing the potential of the PMP as a mechanism to prevent morbidity and mortality due to substance misuse.

## Purpose of the Annual PMP Report

Pursuant to Public Law Chapter 460, the Department shall provide to the joint standing committee of the Legislature having jurisdiction over health and human services matters on or before January 15th of each year, and at such other times as the committee requests, data pertaining to the aggregate number of prescriptions of each drug required to be included in the program, the number of prescribers participating in the program categorized by specialty, any historical trends or patterns in prescribing practices within the State, any progress in the implementation of information sharing agreements authorized by subsection 4-A and any other information pertaining to the work of the program as requested by the committee that is reasonably available to the Department, as long as all information reasonably likely to reveal the patient or the prescriber or other person who is the subject of the information has been removed.

## Definitions

- **Delegate/Designee** – Any staff member duly authorized by a prescriber
- **Morphine Milligram Equivalents (MME)** – The standard value utilized to compare opioid doses and potency
- **Opiate** – A drug produced using naturally derived opium from poppy flowers (e.g. codeine, morphine, heroin)
- **Opioid** – A drug produced using chemical components synthesized in a laboratory setting (e.g. oxycodone, hydrocodone, fentanyl)

- **Opioid Agonist** – A drug that fully activates the opioid receptors in the brain, resulting in the complete opioid effect; both opiates and opioids can be opioid agonists (e.g. codeine, morphine, oxycodone, heroin, fentanyl, methadone[1])
- **Opioid Partial Agonist** – A drug that activates the opioid receptors in the brain to a much lesser degree than a full agonist; typically used as medications to minimize opioid withdrawal symptoms as part of opioid use disorder treatment (e.g. Subutex, Suboxone, buprenorphine)
- **Opioid Antagonist** – A drug that binds to the opioid receptors in the brain without activating them, thus displacing and/or blocking the receptors from binding with opioid agonists; typically used as an overdose reversal treatment (e.g. naloxone/Narcan)
- **Patient Report –** A report that displays the prescription drug activity for a specific patient
- **Total Quantity** – The total number of doses for a specific medication (Doses include tablets, kits, and capsules)

## History and Description of the Prescription Monitoring Program (PMP)

The use and functionality of the PMP database has evolved from a tool to prevent and monitor for doctor shopping and so-called "pill mills" to a tool for surveillance, education, prevention, and intervention. Prior to the establishment of Maine's Prescription Drug Monitoring Program database in 2003, it was extremely difficult for prescribers and pharmacists to identify drug-seeking behavior, as there was no centrally available record that contained patients' complete, up-to-date prescription history. As a result, many drug-seeking patients were not referred to appropriate medical care for help with prescription drug dependency or to law enforcement for an investigation if appropriate. When drug-seeking patients were detected by prescribers, most were dismissed from the medical practice or refused service, forcing the patient to move on to a different unsuspecting prescriber or pharmacy – or to seek medication from illicit sources.

The Maine legislature established the PMP in 2003. It is administered by and falls under the authority of the Office of Behavioral Health (OBH; formerly known as the Office of Substance Abuse and Mental Health Services). Pharmacies that dispense schedule II, III and IV controlled substances are mandated to submit dispensation data to the PMP by the next business day. The PMP database is available online at no cost to prescribers and dispensers of controlled substances. Any health care provider with a Drug Enforcement Agency (DEA) number may register to request reports for new and existing patients. Licensed pharmacists may also access the PMP to request patient data. Patients have access to their own information by requesting it from their healthcare provider or from OBH. Medical licensing boards (e.g. the Maine Board of Licensure in Medicine) may access clinicians' prescribing history if a practice violation is suspected. In limited circumstances, PMP records can be available to law enforcement officers for ongoing investigations through approval of

[1]Methadone prescribed for the treatment of OUD is dispensed at Opioid Treatment Programs (OTP; aka methadone clinics) and not captured in the PMP, which only reflects controlled substances dispensed at retail pharmacies. More information and metrics related to methadone treatment in Maine can be found on the Maine Drug Data Hub: www.mainedrugdata.org .

a grand jury subpoena. In cases of suspected death due to drug overdose, the Office of the Chief Medical Examiner may access PMP records to determine whether the decedent had an active prescription for a controlled substance within the 12 months prior to death.

The PMP presents a complete picture of a patient's prescribed controlled substance use history by providing a single point of collection and access to controlled substance prescriptions that have been dispensed to an individual patient. As a healthcare tool, the PMP is used to improve the quality of patient care and to reduce the potential for prescription misuse, abuse, and overdose. Providers gain insight into patients' histories and risk factors at the point of care, allowing for more informed treatment decisions and the opportunity to offer referral to treatment for substance use if appropriate. The PMP also allows prescribers to better understand their own prescription patterns and compare themselves to their peers.

The Maine PMP serves multiple functions:

- Collects data regarding every controlled substance prescription for drugs Schedule II through V, as defined under Maine's Controlled Substance Act
- Improves patient care by providing clinicians and pharmacists with a comprehensive, up-to-date five-year record of patients' controlled substance dispensation history
- Assists health care providers in identifying potential medication interactions and/or drug therapy complications
- Improves communication between pharmacists and prescribers to help prevent drug misuse, abuse and overdose
- Provides automated clinical alerts to prescribers and pharmacists in specific circumstances where additional attention may be warranted
    - Morphine Milligram Equivalent (MME) threshold
    - Concurrent opioid and benzodiazepine prescriptions
    - Prescriber/dispenser threshold
- Enables medical licensing boards to investigate and enforce potential practice violations
- Reduces potential for prescription drug diversion
- Assists law enforcement in conducting investigations where malfeasance is suspected
- Contributes information on active controlled substances prescriptions for investigations of suspected overdose deaths by the Office of the Attorney General / Office of the Chief Medical Examiner

### *Subsequent State Laws and Regulations Related to the PMP*

Recent legislative mandates have been directed towards increased PMP utilization by both prescribers and dispensers, as well increased reporting requirements intended to limit prescription drug diversion, misuse, and addiction risk. In 2016 Maine passed Public Law, Chapter 488, *An Act to Prevent Opiate Abuse by Strengthening the Controlled Substances Prescription Monitoring Program*. The Legislation made the following changes to address opioid prescribing and PMP use:

1. Mandated use of the State's Prescription Monitoring Program prior to the initial prescription and every 90 days after for chronic prescriptions, and expanded those who use it to include veterinarians

2. Imposed strict limits on the dosage size and supply of opioid prescriptions for acute and chronic pain and included several exemptions for certain provider types, (*e.g.,* emergency rooms, long-term care facilities), and conditions, (*e.g.,* active and aftercare cancer treatment, hospice care)
3. Mandated frequency of education for opioid prescribers
4. Mandated electronic prescribing of opioids
5. Provided for a "Partial Fill" at a pharmacy, at the direction of the patient.

In the spring of 2017, the legislature made changes through Legislative Document (LD) 1363, as follows.

- Added language allowing dispensers to provide an early refill to individuals provided that early refills did not represent a pattern
- Allowed dispensers to contact providers by phone to verify and document information about prescriptions
- Added protocols for dispensers receiving out of state prescriptions
- Delayed implementation of ICD-10 code requiring the code on any prescription over 100 MME using the palliative care exemption until July 2018.

Further changes were introduced in the spring of 2017 through LD 1031:

- Clarified the definition of palliative care
- Added a serious illness definition
- Altered the definition of dispenser to eliminate reference to health care professionals with authority to dispense
- Eliminated the requirement for emergency departments to submit dispensations of less than a 48-hour supply
- Removed the requirement for a PMP check and the 100 MME limit if a prescription is directly related to a surgical procedure.

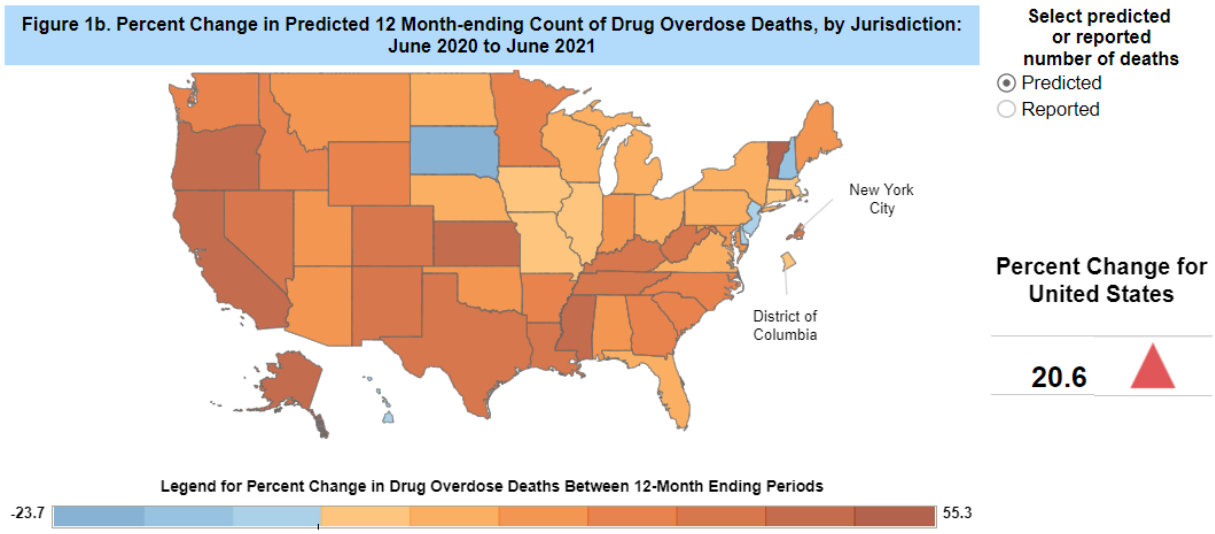
In 2017 the legislature enacted LD 184, which enabled Chief Medical Officers (CMOs), Medical Directors, and Administrative Prescribers employed by licensed hospitals in the State of Maine to access the prescribing histories of their employed prescribers through the PMP. In 2021 LD 1333 was enacted to allow the same access for CMOs employed by licensed Federally Qualified Health Centers (FQHC) and other types of medical practices. CMO access may be granted upon submission of completed registration, user acknowledgement form, and employed physician list.

## Background: A Rapidly Evolving Overdose Crisis

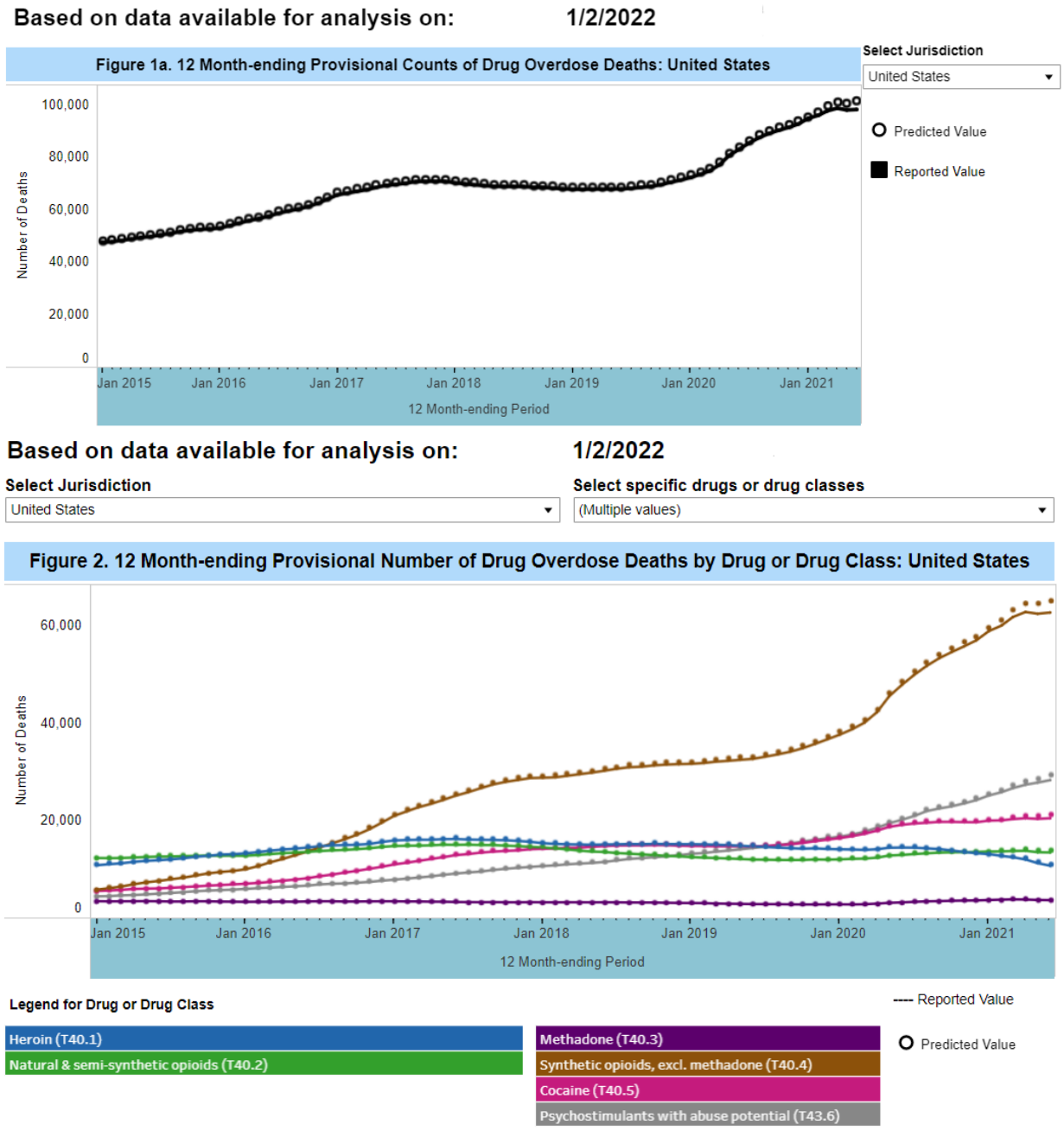
Drug misuse, addiction, and overdose constitute a steeply escalating public health crisis across the United States. From 1999 to 2019, a total of over 840,000 Americans died of drug overdose (US CDC, 2021). Nationwide, drug overdose deaths increased 29.6% from March 2020 to March 2021 – adding another increase in mortality on top of the 21.3% increase in over the same period in 2019-2020 (CDC WONDER, 2022). The total number of reported drug overdose deaths hit a record high

over the 12 months ending in March 2021: 96,779 people (CDC WONDER, 2021) died due to overdose during this period.

*Source: CDC WONDER / National Center for Health Statistics*




*Source: US CDC National Center for Health Statistics: Provisional Drug Overdose Death Counts*




*Source: US CDC National Center for Health Statistics: Provisional Drug Overdose Death Counts*

### *Waves of the Overdose Epidemic*

Along with the rest of the nation, Maine's opioid crisis began in the late 1990s, when pharmaceutical companies began promoting prescription opioid medications as safe, low-risk treatments for acute and chronic pain. This marketing campaign coincided with a shift in thought among physicians towards treating a patient's pain as the "fifth vital sign." Within a few years, prescriptions for opioid medications like OxyContin and hydrocodone skyrocketed.

Once it became clear that prescription opioid medications are highly addictive, most states, including Maine, imposed restrictions how these medications and other controlled substances could be prescribed. Although the restrictions had the desired effect of reducing the number of prescriptions for opioid medications, the abrupt reduction in prescription opioid availability caused a spike in demand for illicit pharmaceutical and non-pharmaceutical opioids to fill the gap. People who had become addicted to prescription opioid medications increasingly turned to less expensive illicit opioids such as heroin and, in recent years, the even more potent and deadly fentanyl.

Maine's overdoses reflect the national trends. Initial increases in deaths in the late 1990s and early 2000s were largely caused by prescribed pharmaceutical opioids. Drug overdose deaths have been trending more sharply upward since 2013, when toxicology reports conducted by the Maine Office of the Chief Medical Examiner (OCME) first identified decedents with non-pharmaceutical (illicitly manufactured) fentanyl and fentanyl analogues in their bloodstreams at the time of death.

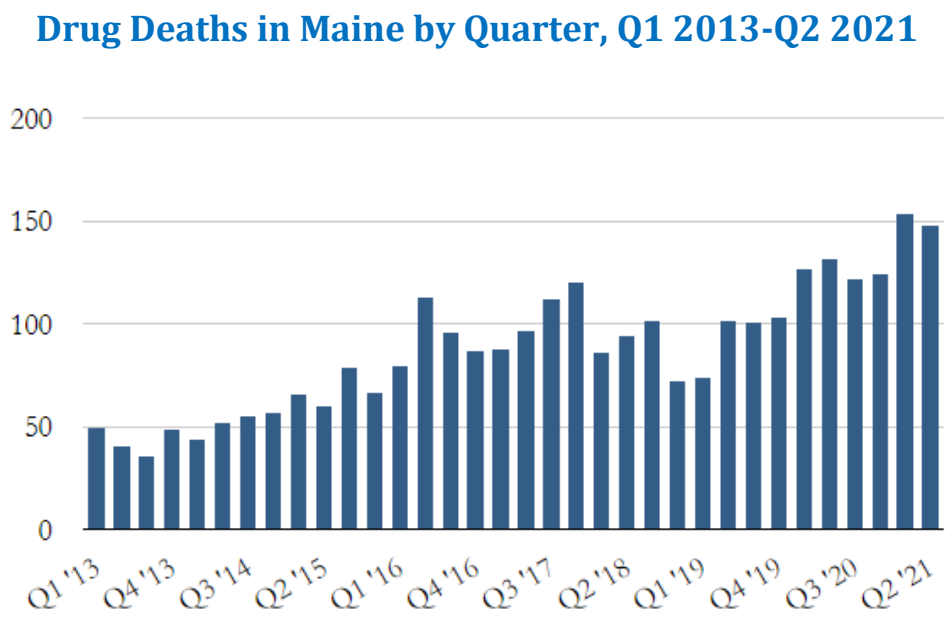
Nationally, over 500,000 of the 840,000 overdose deaths from 1999-2019 were due to opioids, either alone or in combination with other drugs (US CDC, 2021). The rise in opioid overdose deaths can be separated into three distinct waves:

1. The first wave of what came to be called the Opioid Epidemic began with increased prescription of pharmaceutical opioids in the 1990s. Painkillers like OxyContin were aggressively marketed by pharmaceutical manufacturers, and deaths due to prescription opioids began to rise around 1999 (US CDC, 2008).
2. The second wave of the Opioid Epidemic began in 2010, as federal and state policies began to curb over-prescribing of opioid painkillers. People who had become addicted to prescription opioids turned to illicit opioids like heroin when supplies of pharmaceutical opioids were no longer readily available, and deaths due to heroin and other illicit opioids rose (MMWR MorbMortal Wkly Rep. 2014, Oct. 3).
3. The third wave of what is now more accurately referred to as a nationwide overdose crisis began in 2013, with the increased availability of illicitly manufactured fentanyl and other novel (newly synthesized) synthetic opioids. (MMWR MorbMortal WKLY Rep. 2017). Illicitly manufactured fentanyl and its derivatives are now commonly found in conjunction with heroin, counterfeit pills, and cocaine (DEA, National Drug Threat Assessment, 2019).

The record high number of overdose deaths in 2021 have been widely attributed to two coinciding factors: First, the exponential increase in the illicit manufacture and distribution of the powerful synthetic opioid fentanyl; and second, the impact of isolation, disruption, and stress related to the COVID-19 pandemic. As criminal drug manufacturers have learned to quickly and easily synthesize fentanyl using readily available industrial chemicals, the availability of this extremely potent drug (25 times more potent than the pharmaceutical opioid oxycodone, and 50-100 times more powerful than heroin) has skyrocketed.

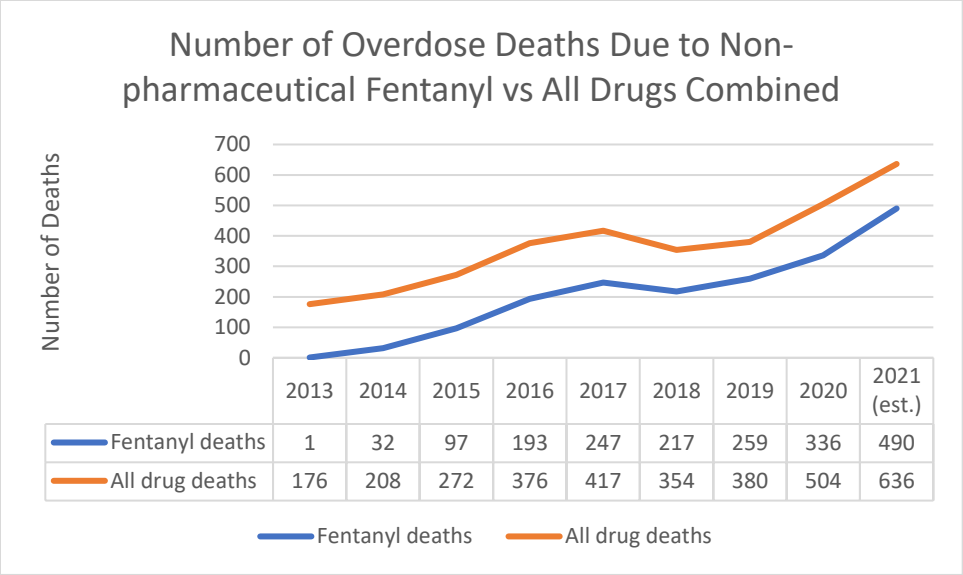
Because fentanyl is so powerful, a much smaller amount – smaller than a single grain of salt – is sufficient to produce the "high" desired by the user. For this reason, criminal drug cartels, traffickers, and distributors have begun using fentanyl as an additive or cutting agent in other illicit

substances that usually do not contain any opioid components, like cocaine, meth, counterfeit pills, and cannabis. As a result, the illicit drug supply has become highly toxic and unpredictable; users have no way of knowing what co-intoxicants might be present in their substance of choice. A final contributor to the lethality of fentanyl is its rapid action: injected fentanyl can cause overdose in less than sixty seconds.




*Source: Maine Office of the Attorney General, Drug Overdose Death Report Q1-Q2 2021*

While the relative percentage of overdose deaths from all other substances decreased slightly since 2013, the overall trend in drug deaths has closely mirrored the sharp upward trajectory of deaths due to fentanyl. An estimated 636 Mainers died of drug overdose in 2021, with 490 of these deaths (77%) due to illicit fentanyl. This finding aligns with the increasing availability of illicitly manufactured fentanyl in the drug supply in Maine and nationwide.




*Source: Maine Office of the Attorney General*

In Maine, substance misuse is a leading cause of injury, morbidity, and mortality across demographic groups. As part of a comprehensive drug overdose prevention strategy, PMPs can be instrumental in reducing the availability of prescription opioids and other controlled substances, as well as fostering safer prescribing practices.

**Prescription Drug Misuse Among Maine Youth and Adults**

| Indicator Title | Source | Population | Baseline Rate/ count | Baseline Year | Current Rate/ count | Current Year | Target |
|---|---|---|---|---|---|---|---|
| Consumption | | | | | | | |
| Lifetime misuse of prescription pain medicine among high school students | MIYHS | High School | 9.8% | 2017 | 11.7% | 2019 | 7.9% |
| Past month misuse of prescription drugs among high school students | MIYHS | High School | 4.8% | 2015 | 5.0% | 2019 | 3.9% |
| Past month misuse of prescription drugs among adults | BRFSS | 18+ | 1.0% | 2014 | 1.0% | 2017 | 0.8% |
| Past year nonmedical use of pain relievers among adults | NSDUH | 18+ | 7% (18-25)<br>4% (26+) | 2015-2016 | 7% (18-25)<br>3% (26+) | 2017–18 | 5.6% (18–25)<br>3.2% (26+) |
| Lifetime misuse of prescription drugs among adults | BRFSS | 18+ | 4.5% | 2014 | 4.0% | 2017 | 3.7% |

*Source: Maine CDC, Office of Alcohol, Tobacco and Substance Use Prevention*

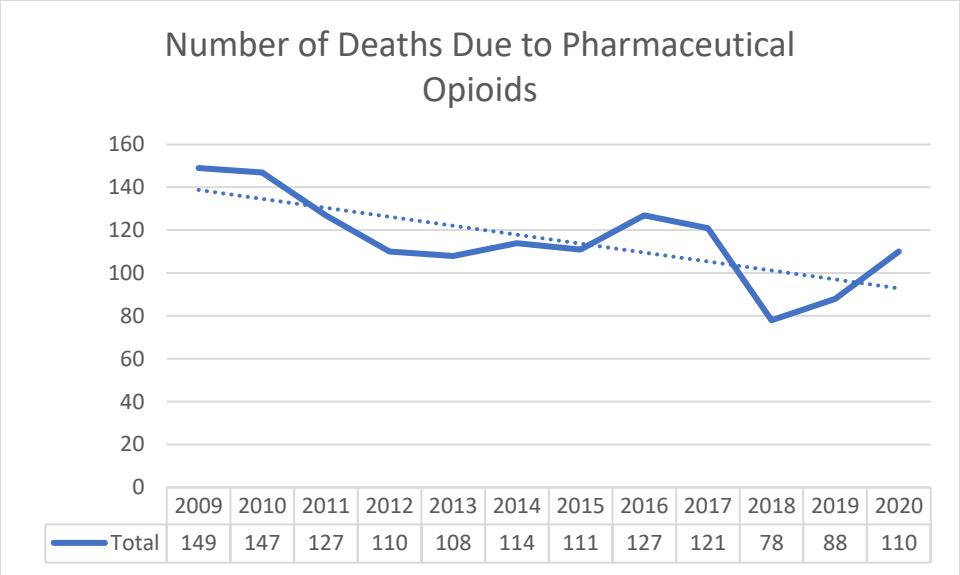
## PMP Metrics

**Prescription Opioid Agonist Access and Availability, 2015-2021**

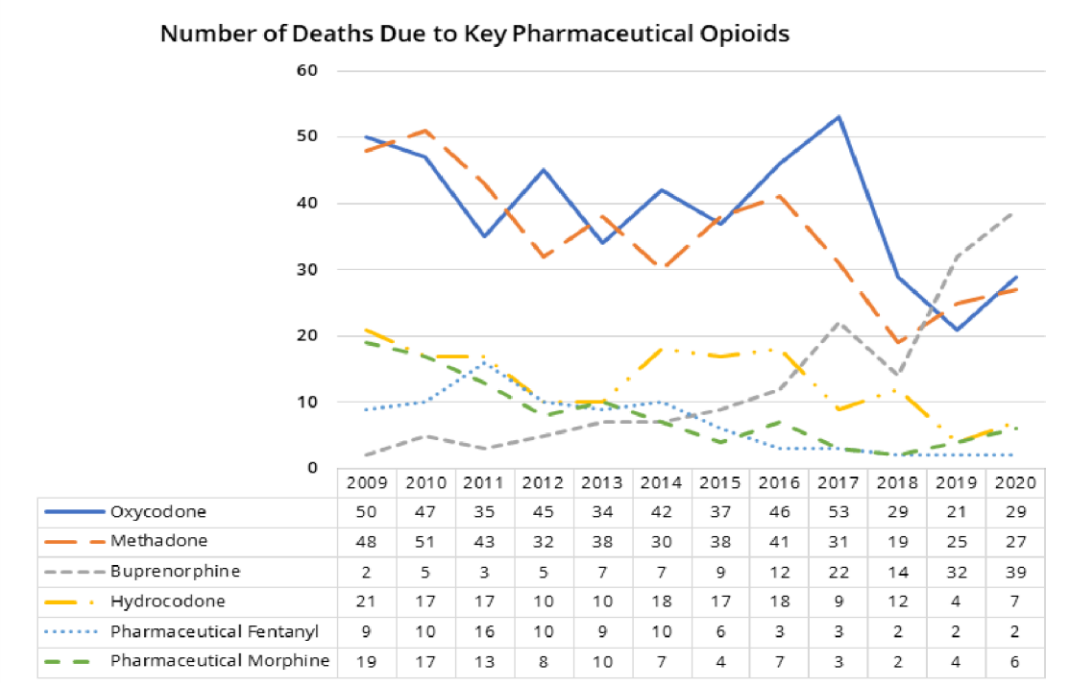
| Indicator Title | Population | Baseline Rate/count | Baseline Year | Current Rate/count | Current Year | Percent change |
|---|---|---|---|---|---|---|
| Annual number of opioid agonist prescriptions dispensed in-state | All ages | 1,070,682 | 2015 | 628,084 | 2021 | 41.3% |
| Number of opioid agonist prescriptions dispensed (in-state) *per capita* | All ages | 0.79 Rx/person | 2015 | 0.47 Rx/person | 2021 | 40.5% |
| Annual number of narcotic doses dispensed *per capita* | All ages | 60 doses/person | 2015 | 31 doses/person | 2021 | 48.3% |
| Annual number of clinical alerts (in-state) | All ages | 235,005 | 2015 | 260,499 | 2021 | 10.8% |

*Source: Maine Office of Behavioral Health*

Though overdose deaths are an imperfect measure of the impact of substance use disorder on individuals, families, and Maine as a whole, it is one of the most straightforward metrics available to understand trends and programmatic outcomes, including those related to the PMP. Trends in overdose deaths due to the most commonly prescribed pharmaceutical opioids are down overall, though it is important to note that most deaths due to pharmaceutical opioids also involve one or more illicit substances, such as non-pharmaceutical (illicitly produced) fentanyl, cocaine, or methamphetamine.




*Source: Maine Office of the Attorney General, Annual Drug Overdose Death Report 2020*




*Source: Maine Office of the Attorney General, Annual Drug Overdose Death Report 2020*

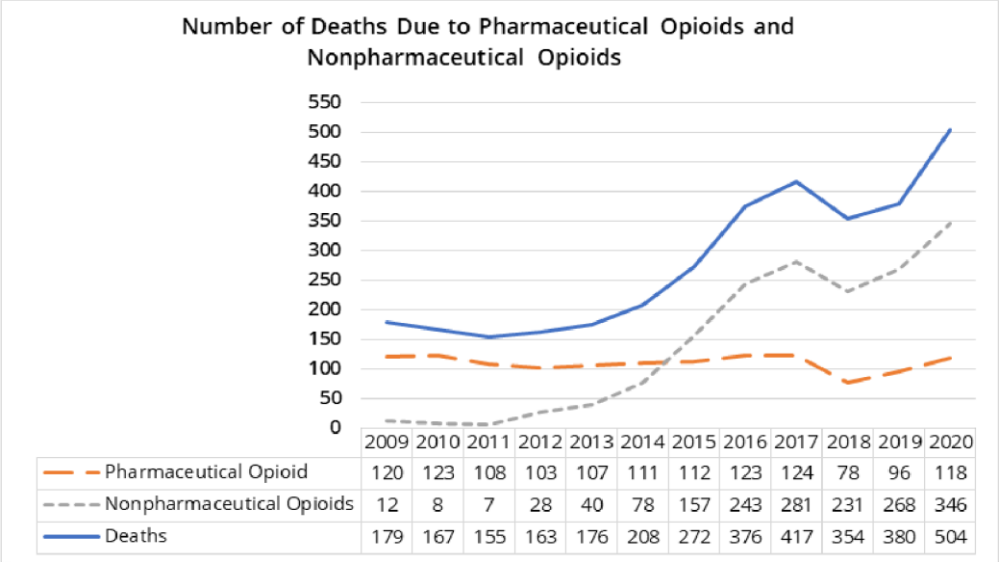
**Maine Drug Overdose Deaths by Substance Involved In 2020**

| Specific drug or drug category causing the death (alone or in combination with other drugs and/or alcohol) | Number of Deaths | Percent of 504 Drug Deaths |
|---|---|---|
| Number of deaths caused by more than one drug | 407 | 81% |
| Any pharmaceutical drug | 322 | 64% |
| Any opioid, pharmaceutical or nonpharmaceutical | 417 | 83% |
| Naloxone present in the toxicology report * | 140 | 28% |
| Any illicitly manufactured drug (includes heroin/morphine, non-pharmaceutical fentanyl, fentanyl analogs, other illicitly manufactured opioids, cocaine, methamphetamine, and MDMA | 399 | 79% |
| Any nonpharmaceutical opioid drugs (includes heroin/morphine, fentanyl, fentanyl analogs, U-47700, mitragynine) | 346 | 69% |
| Fentanyl and/or fentanyl analogs (known pharmaceutical fentanyl removed) | 336 | 67% |
| Heroin/morphine (known pharmaceutical morphine removed) | 57 | 11% |
| Any pharmaceutical opioid<br>23 (19%) of 118 had at least one current opioid prescription;<br>8 (35%) of those 23 also had nonpharmaceutical fentanyl mentioned as a cause of their death. | 118 | 23% |
| Highest frequency opioids itemized below:<br>Buprenorphine [12 (31%) decedents had current prescription]<br>Methadone [1 (4%) decedent had current prescription]<br>Oxycodone [6 (21%) decedents had current prescription] | <br>39<br>27<br>29 | <br>8%<br>5%<br>6% |
| Any pharmaceutical benzodiazepine | 84 | 17% |
| Cocaine | 118 | 23% |
| Methamphetamine | 99 | 20% |

*Source: Maine Office of the Attorney General, Annual Drug Overdose Death Report 2020*

The Maine Office of the Chief Medical Examiner (OCME), which investigates all drug overdose deaths, is statutorily authorized to access PMP records to determine whether decedents held an active prescription for a controlled substance at the time of death. If opioids are involved in an overdose death, OCME also checks decedents' PMP records for any prescription of a pharmaceutical opioid over the past 12 months. In 2020, the most recent year for which complete data is available, 23% of drug overdoses involved any pharmaceutical opioid and only 4.5% had a current opioid prescription. This data illustrates that though the rate of pharmaceutical opioid prescribing has decreased significantly since the inception of the PMP in Maine, pharmaceutical opioids continue to be diverted and sold through illicit channels.

Though data for Q3 and Q4 2021 has not yet been finalized at the time of this report, the Office of the Attorney General (OAG)/Office of the Chief Medical Examiner (OCME) have released findings on drug overdose deaths through Q2 2021. Pharmaceutical opioids were the cause of death in 26% of cases during Q1-Q2 2021, nearly always in combination with other drugs. This proportion is similar to 2020, during which 25% of overdose deaths were caused by pharmaceutical opioids.

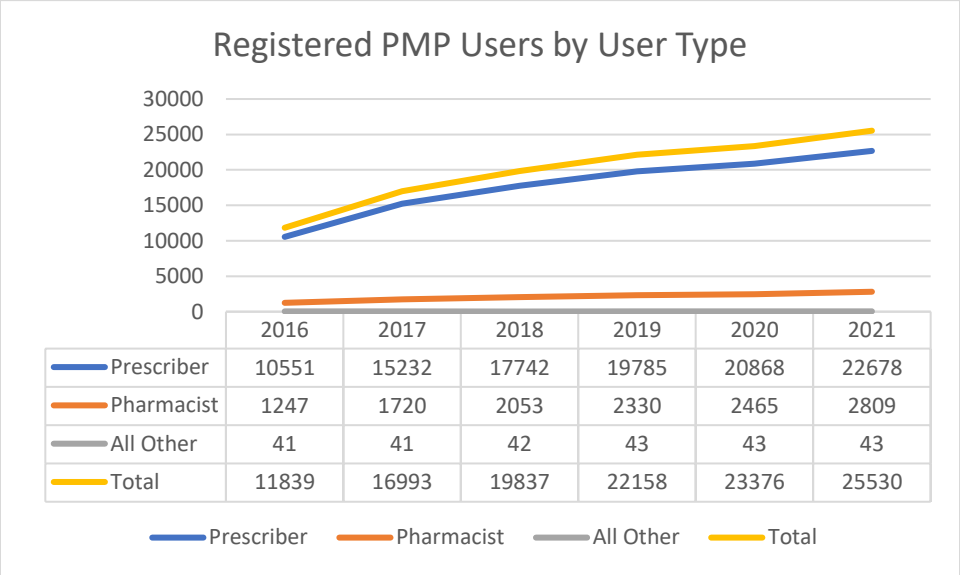



| | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pharmaceutical Opioid | 120 | 123 | 108 | 103 | 107 | 111 | 112 | 123 | 124 | 78 | 96 | 118 |
| Nonpharmaceutical Opioids | 12 | 8 | 7 | 28 | 40 | 78 | 157 | 243 | 281 | 231 | 268 | 346 |
| Deaths | 179 | 167 | 155 | 163 | 176 | 208 | 272 | 376 | 417 | 354 | 380 | 504 |

*Source: Maine Office of the Attorney General, Annual Drug Overdose Death Report 2020*

## Registration of Prescribers and Dispensers With the PMP

As of December 31, 2021, there were **22,678** prescribers and **2,809** pharmacists registered in Maine's Prescription Monitoring Program (PMP) database.




| | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 |
|---|---|---|---|---|---|---|
| Prescriber | 10551 | 15232 | 17742 | 19785 | 20868 | 22678 |
| Pharmacist | 1247 | 1720 | 2053 | 2330 | 2465 | 2809 |
| All Other | 41 | 41 | 42 | 43 | 43 | 43 |
| Total | 11839 | 16993 | 19837 | 22158 | 23376 | 25530 |

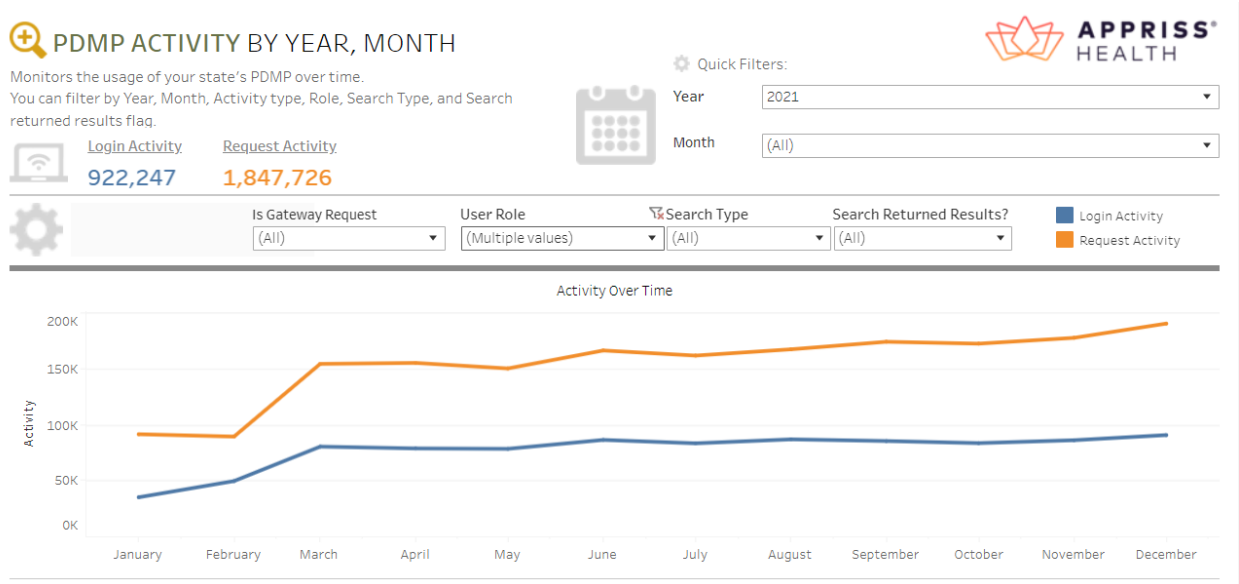
*Source: Maine Office of Behavioral Health*

## Utilization of the PMP

The following data represents the utilization of Maine's Prescription Monitoring Program database by prescribers (clinicians) and pharmacists; administrators and investigators are represented separately.

There were a total of **1,847,726** PMP record checks by prescribers and pharmacists in 2021.

## Number of PMP record checks and number of PMP logins, 2021

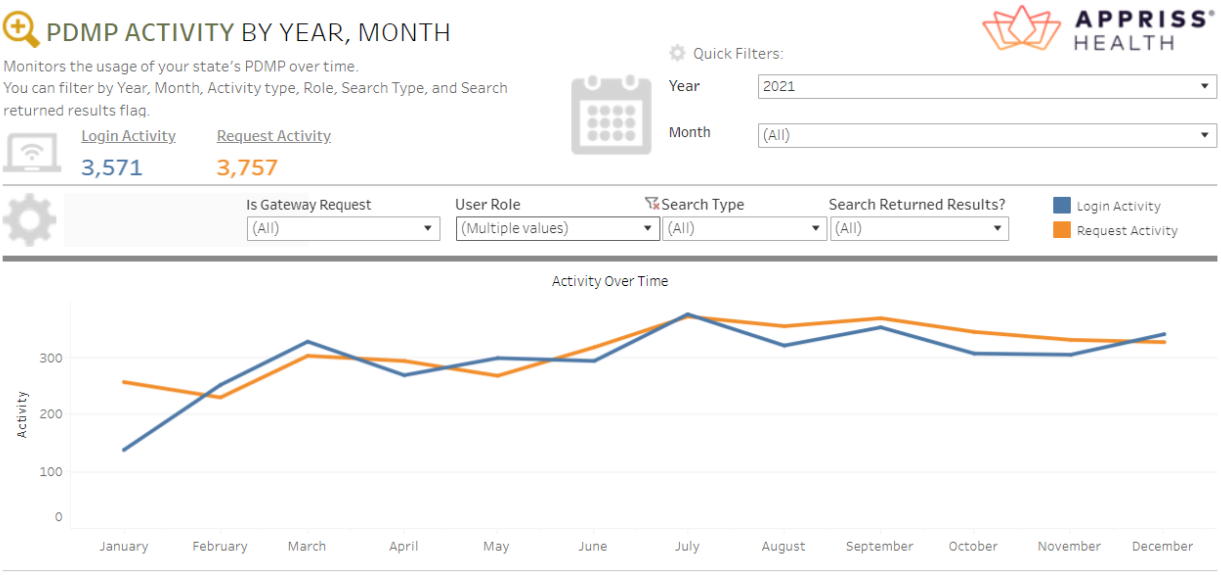



| User Role | 2021 JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Prescriber Delegate - Unlicensed | 39,599 | 37,950 | 86,222 | 91,098 | 88,409 | 100,059 | 92,454 | 97,237 | 97,365 | 92,134 | 93,097 | 97,871 |
| Pharmacist | 41,746 | 42,200 | 57,941 | 54,934 | 52,138 | 58,476 | 59,794 | 61,553 | 66,570 | 71,208 | 77,124 | 86,457 |
| Physician (MD, DO) | 15,762 | 22,443 | 27,302 | 24,702 | 24,985 | 26,072 | 26,064 | 26,498 | 26,950 | 25,050 | 24,621 | 26,870 |
| Prescriber Delegate - Licensed | 9,926 | 10,784 | 24,773 | 25,061 | 24,810 | 27,776 | 27,371 | 27,051 | 27,692 | 27,670 | 28,115 | 27,787 |
| Nurse Practitioner / Clinical Nurse Specialist | 10,537 | 13,662 | 18,040 | 17,970 | 16,786 | 18,018 | 17,403 | 18,175 | 17,840 | 17,517 | 17,956 | 18,524 |
| Pharmacy Technician | 3,005 | 2,967 | 6,836 | 8,080 | 8,103 | 8,050 | 8,013 | 8,418 | 7,739 | 8,034 | 8,066 | 8,903 |
| Physician Assistant | 2,588 | 4,437 | 6,953 | 6,234 | 6,818 | 7,173 | 6,738 | 6,948 | 7,038 | 6,966 | 6,623 | 6,631 |
| Medical Resident with Prescriptive Authority | 260 | 876 | 1,944 | 1,872 | 2,229 | 2,316 | 2,866 | 3,074 | 2,964 | 2,675 | 2,777 | 2,566 |
| Dentist | 1,212 | 1,645 | 1,899 | 1,596 | 1,739 | 2,068 | 1,879 | 2,392 | 2,096 | 1,889 | 1,912 | 1,775 |
| Pharmacist in Charge | 85 | 166 | 751 | 665 | 908 | 832 | 881 | 1,073 | 1,265 | 916 | 1,178 | 1,103 |

*Source: Maine Office of Behavioral Health*

The PMP is regularly used by Maine's medical licensure boards as a tool to investigate suspected licensing violations and other problematic prescribing practices. Department employees also utilize the PMP for public health research and federal grant reporting purposes. In 2021, there were a total of 3,757 PMP record checks conducted by investigators and administrators.

# Utilization of the PMP by Investigators and Administrators




| | 2021 | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **User Role** | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
| Medical Examiner - Delegate | 259 | 273 | 381 | 336 | 339 | 390 | 410 | 426 | 490 | 468 | 421 | 429 |
| Admin | 91 | 113 | 163 | 152 | 149 | 130 | 261 | 164 | 158 | 146 | 155 | 159 |
| Null | 4 | 27 | 42 | 19 | 35 | 18 | 17 | 24 | 32 | 20 | 19 | 27 |
| Board of Medicine Investigator | 1 | 29 | 15 | 18 | 6 | 42 | 16 | 22 | 25 | 6 | 11 | 4 |
| Board of Nursing Investigator | 1 | 17 | 10 | 26 | 16 | 19 | 4 | 17 | 13 | 2 | 13 | 8 |
| Medical Examiner/Coroner | 29 | 7 | 2 | 2 | 10 | | 6 | 16 | 2 | 4 | 5 | 23 |
| Board of Osteopathy Investigator | 8 | 13 | 8 | 7 | 6 | 4 | 7 | 4 | | 4 | 10 | 11 |
| Board of Dentistry Investigator | | | | | | 3 | 21 | | | | | 1 |
| Board of Pharmacy Investigator | | 1 | 6 | | 4 | | 4 | 1 | | | | 4 |
| State Medicaid Program | | | | 1 | | 4 | | | | | | |

*Source: Maine Office of Behavioral Health*

## Utilization of Pharmacy Waivers

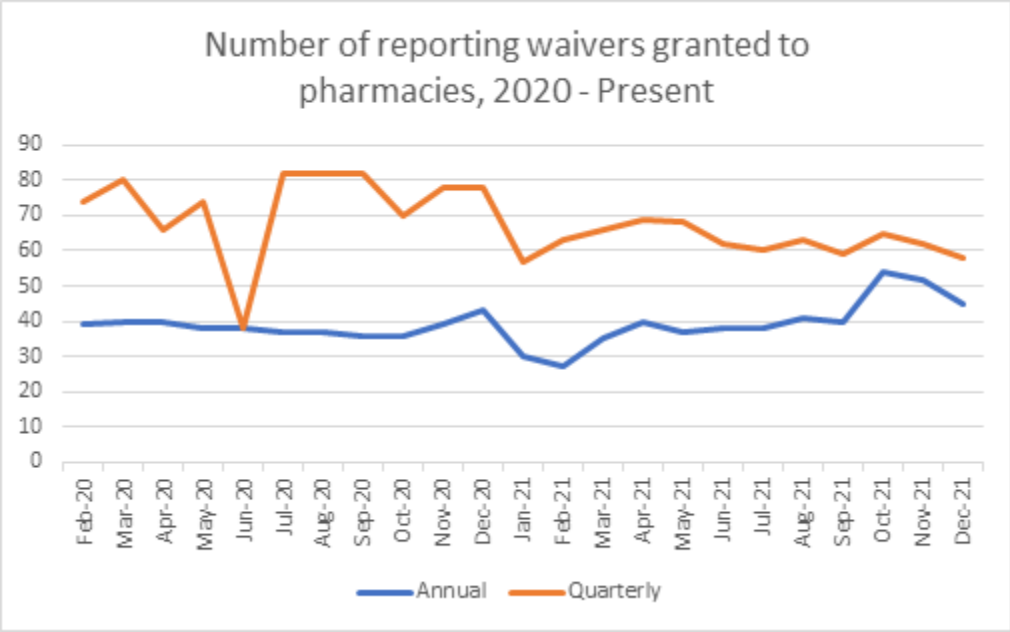
PMP Pharmacy Waivers allow pharmacies to request exemption from the 24-hour dispensation reporting requirement if any of the following criteria apply:

- The volume of controlled substances dispensed is so low that financial hardship will result from being required to make electronic submissions of prescription monitoring information,
- The pharmacy does not currently deliver and/or dispense any drugs covered by the PMP (scheduled II, III and/or IV controlled substances or any other drugs added by the Board of Pharmacy or Maine Office of Behavioral Health) to ultimate users who have a Maine address,

Or

- Any other good cause provided (i.e. pharmacy management system has not been updated to using the correct ASAP data standard)

### Number of 24-hour reporting waivers granted to Maine pharmacies, 2018-2021*

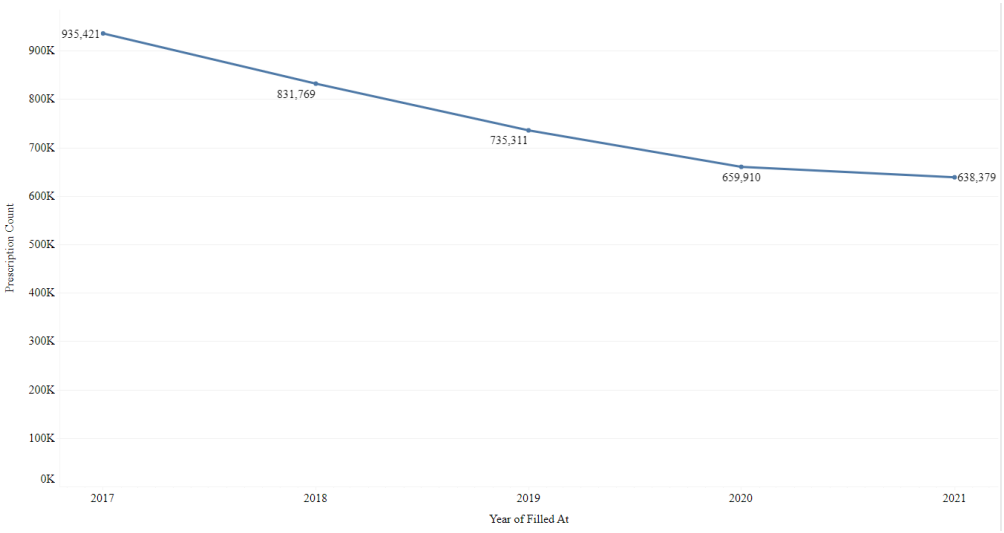



**Note: Waivers are granted on an annual or quarterly basis. Source: Maine Office of Behavioral Health*

## Prescription Opioid Medication Dispensation Trends

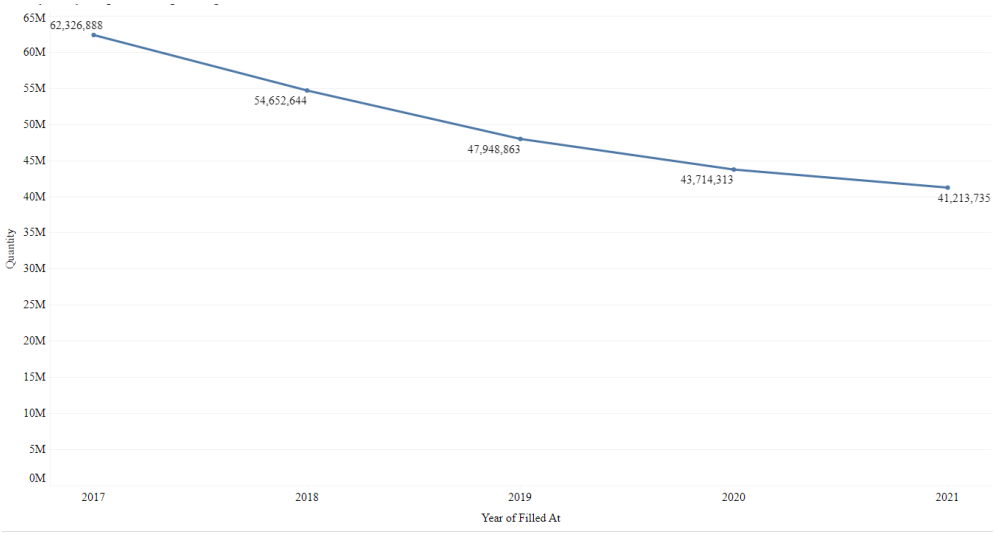
Maine has seen a significant decrease in prescribing and dosing of opioid agonists since the establishment of the PMP. During that same timeframe, prescribing of opioid partial agonists medications to treat opioid use disorders have decreased.

### Total number of opioid agonist prescriptions dispensed, 2017-2021




*Source: Maine Office of Behavioral Health*

### Total number of opioid agonist doses dispensed, 2017-2021



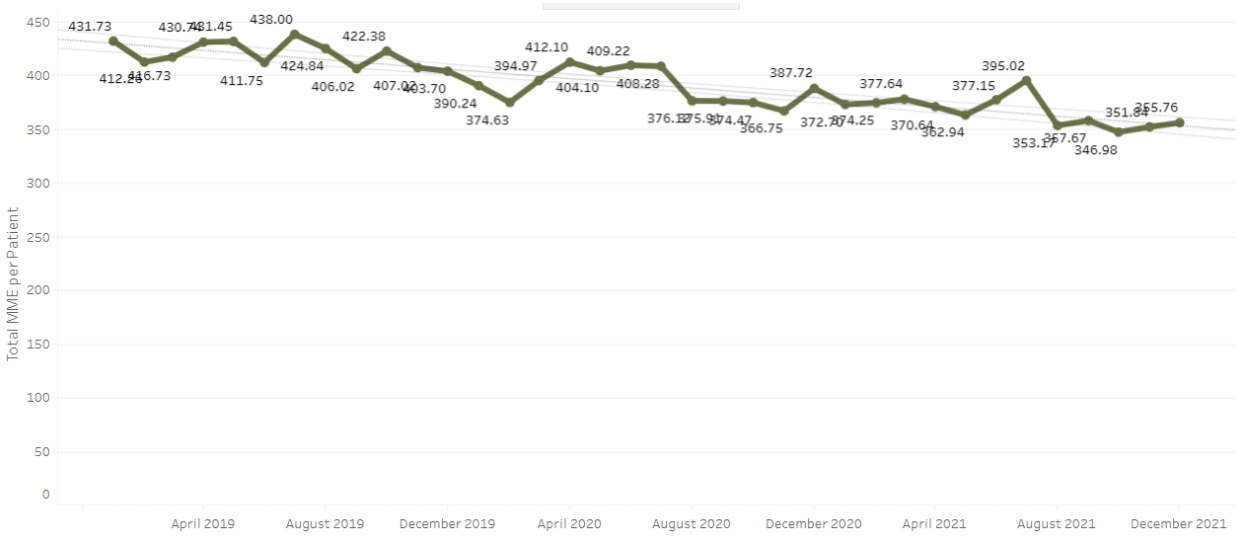

*Source: Maine Office of Behavioral Health*

## Total Morphine Milligram Equivalents (MME) Prescribed

Morphine milligram equivalent (MME) is a measure used by clinicians to safely prescribe opioid medications, particularly to patients who may be taking more than one opioid medication or who may need to be changed from on prescription opioid to another. MME takes into account both the dose (amount of the drug in each pill, e.g. 2mg) and potency (the strength of opioid action for that particular drug) to arrive at the MME, which represents the amount of morphine the medication dose is equal to when prescribed. Total MME is used as a gauge to indicate the potential risk of misuse of a prescribed opioid: stronger (more potent) opioid medications, a higher number of doses per day, and a higher number of days' supply all raise the total MME. Average daily MME is used as a proxy for risk of overdose for an individual patient: patients who are prescribed one or more opioid medications that add up to over 100 MME on average have higher risk of experiencing accidental overdose.

Total MME dispensed per patient has decreased over the last three years, with a reduction of 21.4% from January 2019 to December 2021. This downward trend indicates that when prescribers issue prescriptions for opioid medications, they are writing for lower potency opioids, fewer days' supply, and/or fewer doses per day.

**Trend in Total MME Dispensed per Patient, 2019-2021**



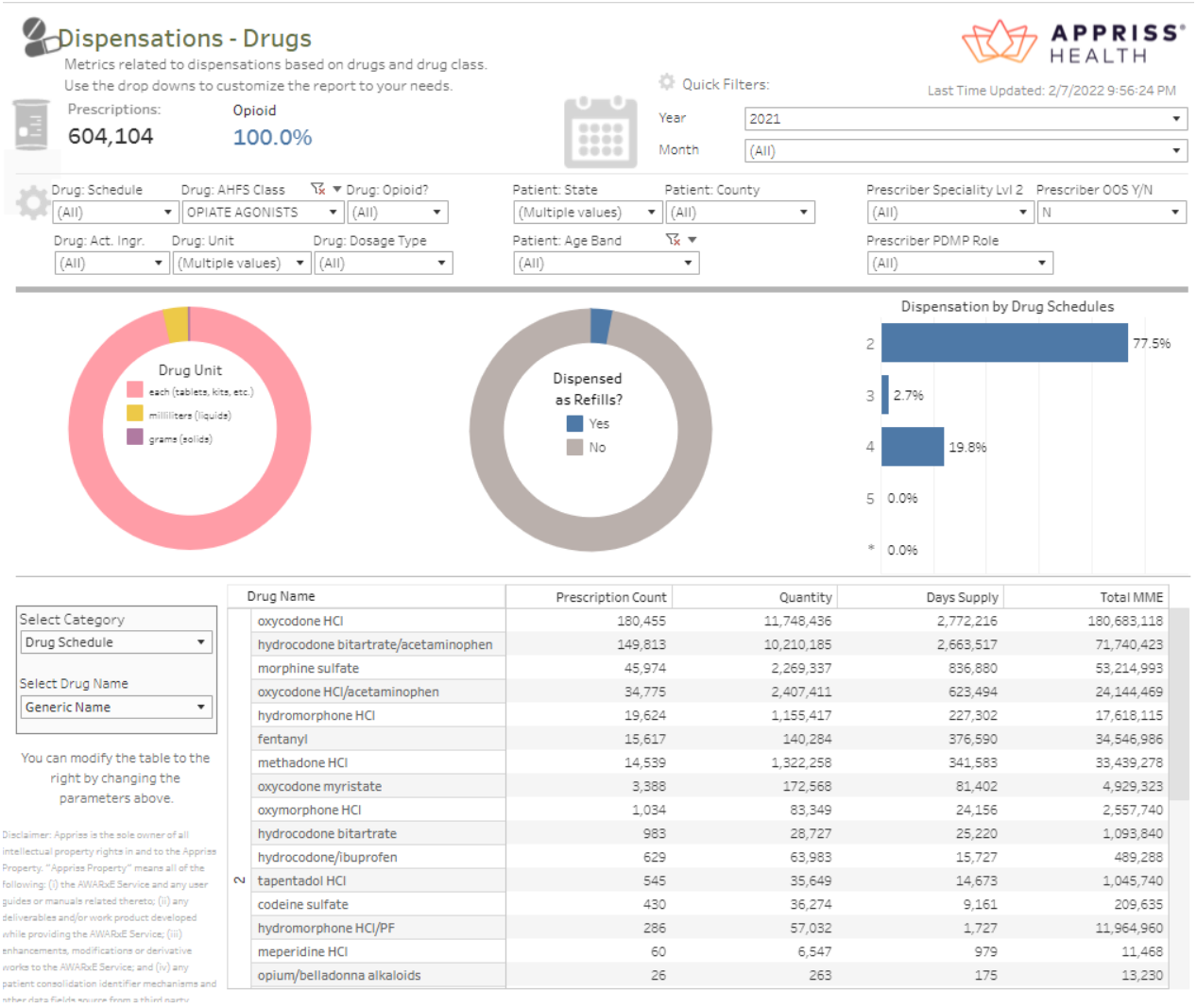

*Source: Maine Office of Behavioral Health*

## Most Frequently Dispensed Opioid Agonist Medications, 2021

This dashboard represents the most frequently prescribed opioid agonist medications in 2021 by number of patients receiving prescriptions for each medication, number of prescriptions dispensed, quantity of doses dispensed, day's supply, and daily MME equivalent. The dashboard also includes information regarding the drug form/unit (tablet, liquid, or gram), whether the prescriptions

issued were new prescriptions or refills, and the drug schedule distribution (Schedule II through IV). Oxycodone was the most frequently prescribed opiate agonist medication in 2021 with 55,077 unique patients filling 180,455 prescriptions; hydrocodone bitartrate/acetaminophen (Vicodin ES) was the second most commonly prescribed, with 45,807 patients filling 149,813 prescriptions; and Tramadol HCL was the third most commonly prescribed, with 35,132 patients filling 119,012 prescriptions.

**Most Frequently Dispensed Opioid Agonist Medications, 2021**




| Drug Name | Prescription Count | Quantity | Days Supply | Total MME |
|---|---|---|---|---|
| oxycodone HCl | 180,455 | 11,748,436 | 2,772,216 | 180,683,118 |
| hydrocodone bitartrate/acetaminophen | 149,813 | 10,210,185 | 2,663,517 | 71,740,423 |
| morphine sulfate | 45,974 | 2,269,337 | 836,880 | 53,214,993 |
| oxycodone HCl/acetaminophen | 34,775 | 2,407,411 | 623,494 | 24,144,469 |
| hydromorphone HCl | 19,624 | 1,155,417 | 227,302 | 17,618,115 |
| fentanyl | 15,617 | 140,284 | 376,590 | 34,546,986 |
| methadone HCl | 14,539 | 1,322,258 | 341,583 | 33,439,278 |
| oxycodone myristate | 3,388 | 172,568 | 81,402 | 4,929,323 |
| oxymorphone HCl | 1,034 | 83,349 | 24,156 | 2,557,740 |
| hydrocodone bitartrate | 983 | 28,727 | 25,220 | 1,093,840 |
| hydrocodone/ibuprofen | 629 | 63,983 | 15,727 | 489,288 |
| tapentadol HCl | 545 | 35,649 | 14,673 | 1,045,740 |
| codeine sulfate | 430 | 36,274 | 9,161 | 209,635 |
| hydromorphone HCl/PF | 286 | 57,032 | 1,727 | 11,964,960 |
| meperidine HCl | 60 | 6,547 | 979 | 11,468 |
| opium/belladonna alkaloids | 26 | 263 | 175 | 13,230 |

*Source: Maine Office of Behavioral Health*

## Number of Opioid Prescription Dispensations Exceeding the Average 100 MME Per Day Limit By Treatment Type, 2018-2021

| Prescription Treatment Type Use | 2018 | 2019 | 2020 | 2021 |
|---|---|---|---|---|
| Unknown treatment type | 2,122,880 | 1,890,642 | 2,120,215 | 2,111,718 |
| 01 Not used for opioid dependency treatment | 271,060 | 323,715 | 54,840 | 51,127 |
| Other use not related to opioid treatment | 10,656 | 18,757 | 22,718 | 19,452 |
| 02 Used for opioid dependency treatment | 4,981 | 47,577 | 17,976 | 18,885 |
| 05 End-of-life and hospice care | 6,813 | 12,808 | 13,766 | 14,275 |
| 07 Acute pain for an individual with a existing opioid prescription for chronic pain | 1,508 | 1,238 | 730 | 11,815 |
| 99 Individuals prescribed a second opioid after proving unable to tolerate the first opioid | | | 156 | 5,202 |
| 03 Pain associated with active & aftercare cancer treatment | 1,841 | 2,503 | 1,409 | 1,957 |
| 09 Patient is participating in a pain management contract | 3,253 | 6,568 | 4,624 | 1,870 |
| 04 Palliative care in conjunction with a serious illness | 9,761 | 14,910 | 2,258 | 1,644 |
| 08 Individuals pursuing an active taper of opioid medications | 558 | 523 | 110 | 97 |
| 06 A pregnant individual with a pre-existing prescription for opioids exceeding 100 MME | 25 | 5 | 10 | 11 |

*Source: Maine Office of Behavioral Health*

## Dispensation of Controlled Substances

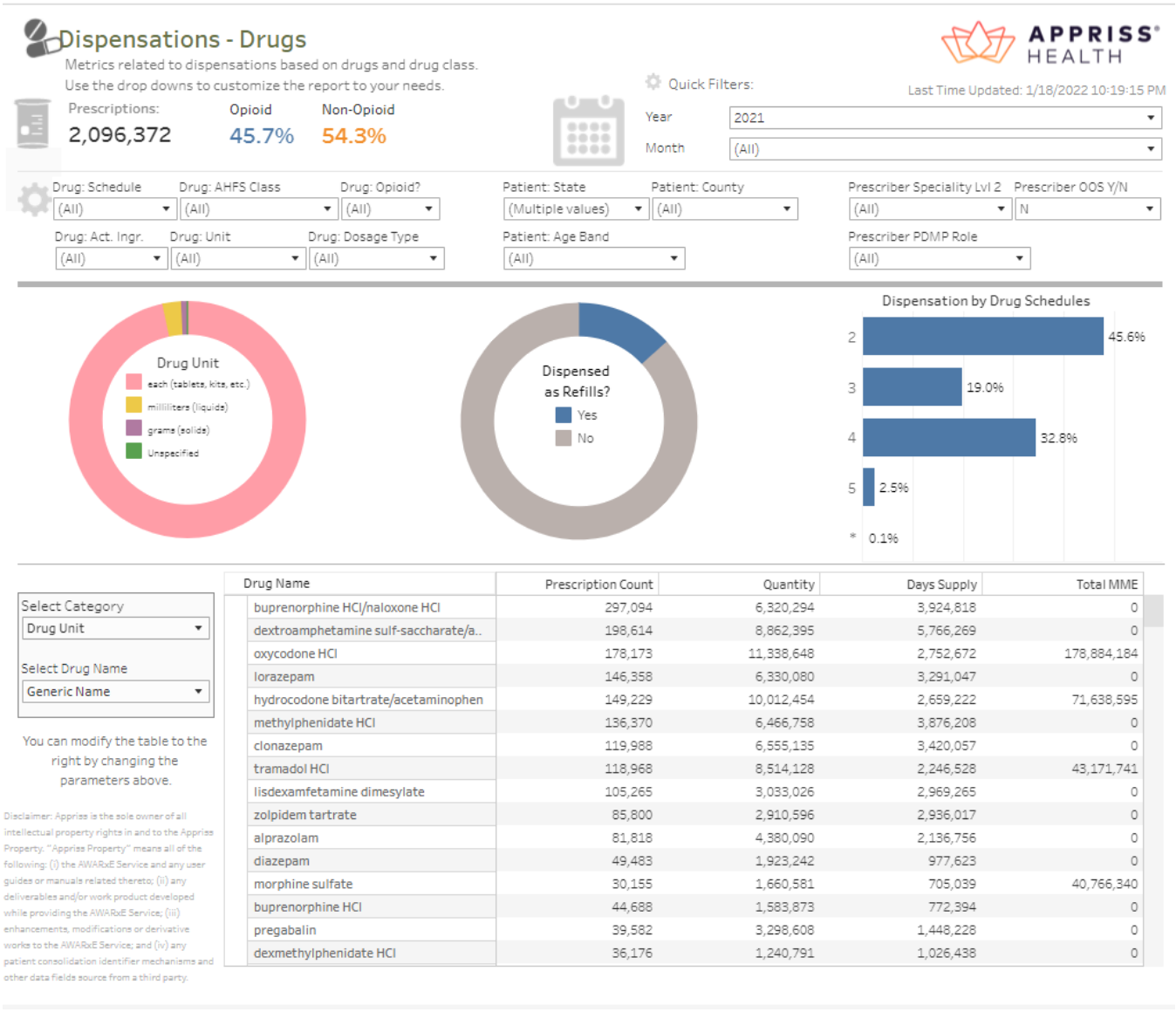
This dashboard represents the most frequently dispensed controlled substances in 2021 by number of prescriptions dispensed. The dashboard also includes information regarding the unique number of patients receiving prescriptions for each medication, number of prescriptions dispensed, quantity of doses dispensed, day's supply, and daily MME equivalent (if applicable), the drug form/unit (tablet, liquid, or gram), whether the prescriptions issued were new prescriptions or refills, and the drug schedule distribution (Schedule II through IV). Buprenorphine was the most frequently dispensed controlled substance in 2021, with 19,440 unique patients filling 360,455 prescriptions; dextroamphetamine sulfate was the second most commonly dispensed, with 24,324 patients filling 214,159 prescriptions; and Oxycodone HCL was the third most commonly dispensed, with 66,316 patients filling 229,138 prescriptions.

### Most Frequently Dispensed Controlled Substances, 2017-2021

| Drug Name | Year | | | | |
|---|---|---|---|---|---|
| | 2017 | 2018 | 2019 | 2020 | 2021 |
| buprenorphine HCl/naloxone.. | 196,670 | 199,647 | 263,430 | 282,441 | 297,044 |
| dextroamphetamine sulf-sa.. | 149,090 | 160,062 | 173,906 | 183,506 | 198,581 |
| oxycodone HCl | 225,280 | 210,385 | 199,329 | 182,009 | 180,455 |
| lorazepam | 186,630 | 175,370 | 166,466 | 159,963 | 154,854 |
| hydrocodone bitartrate/acet.. | 226,262 | 193,576 | 173,198 | 155,323 | 149,813 |
| methylphenidate HCl | 133,136 | 132,773 | 135,481 | 134,367 | 138,017 |
| clonazepam | 148,125 | 138,273 | 129,446 | 124,376 | 119,991 |
| tramadol HCl | 157,576 | 142,669 | 135,950 | 124,001 | 119,013 |
| lisdexamfetamine dimesylate | 90,178 | 90,836 | 93,328 | 96,753 | 105,268 |
| zolpidem tartrate | 112,105 | 104,051 | 95,393 | 90,045 | 85,805 |
| alprazolam | 108,633 | 99,548 | 92,735 | 87,825 | 81,847 |
| diazepam | 64,367 | 57,441 | 53,066 | 50,692 | 50,056 |
| morphine sulfate | 62,169 | 55,302 | 52,609 | 48,296 | 45,974 |
| buprenorphine HCl | 32,719 | 34,604 | 45,965 | 46,960 | 44,827 |
| pregabalin | 18,523 | 27,328 | 33,255 | 36,563 | 39,659 |

*Source: Maine Office of Behavioral Health*

# Most Frequently Dispensed Controlled Substances Dashboard, 2021




| Drug Name | Prescription Count | Quantity | Days Supply | Total MME |
|---|---|---|---|---|
| buprenorphine HCl/naloxone HCl | 297,094 | 6,320,294 | 3,924,818 | 0 |
| dextroamphetamine sulf-saccharate/a.. | 198,614 | 8,862,395 | 5,766,269 | 0 |
| oxycodone HCl | 178,173 | 11,338,648 | 2,752,672 | 178,884,184 |
| lorazepam | 146,358 | 6,330,080 | 3,291,047 | 0 |
| hydrocodone bitartrate/acetaminophen | 149,229 | 10,012,454 | 2,659,222 | 71,638,595 |
| methylphenidate HCl | 136,370 | 6,466,758 | 3,876,208 | 0 |
| clonazepam | 119,988 | 6,555,135 | 3,420,057 | 0 |
| tramadol HCl | 118,968 | 8,514,128 | 2,246,528 | 43,171,741 |
| lisdexamfetamine dimesylate | 105,265 | 3,033,026 | 2,969,265 | 0 |
| zolpidem tartrate | 85,800 | 2,910,596 | 2,936,017 | 0 |
| alprazolam | 81,818 | 4,380,090 | 2,136,756 | 0 |
| diazepam | 49,483 | 1,923,242 | 977,623 | 0 |
| morphine sulfate | 30,155 | 1,660,581 | 705,039 | 40,766,340 |
| buprenorphine HCl | 44,688 | 1,583,873 | 772,394 | 0 |
| pregabalin | 39,582 | 3,298,608 | 1,448,228 | 0 |
| dexmethylphenidate HCl | 36,176 | 1,240,791 | 1,026,438 | 0 |

*Source: Maine Office of Behavioral Health*

## Total Count of Prescriptions Per Stimulant Medication Drug Name

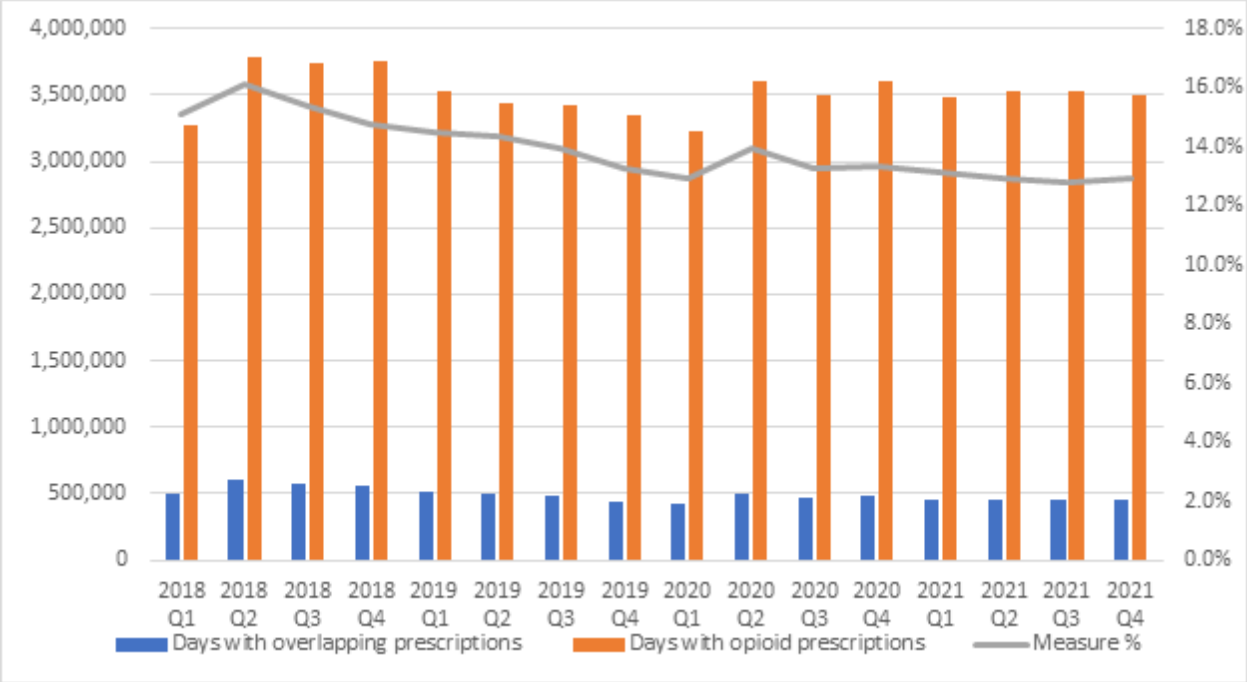
| Generic Name | Dosage Type | Filled At 2017 | 2018 | 2019 | 2020 | 2021 |
|---|---|---|---|---|---|---|
| amphetamine | SUSPENSION,IMMED,EXT.. | 10 | 9 | 16 | 7 | 28 |
| | TABLET,DISINTEGRATING.. | 8 | 20 | 96 | 82 | 77 |
| amphetamine sulfate | TABLET | 36 | 25 | 18 | 4 | 3 |
| dexmethylphenidate HCl | CAPSULE,EXTENDED | 28,193 | 27,501 | 25,709 | 23,214 | 18,978 |
| | TABLET | 9,232 | 9,817 | 9,587 | 9,283 | 9,395 |
| dextroamphetamine sulf-saccharate/amphetamine sulf-aspartate | CAPSULE, EXT RELEASE 2.. | 66,089 | 70,385 | 75,391 | 73,919 | 67,878 |
| | CAPSULE, EXTENDED REL.. | 97 | 735 | 994 | 954 | 836 |
| | TABLET | 93,959 | 99,914 | 94,794 | 63,224 | 51,473 |
| dextroamphetamine sulfate | CAPSULE, EXTENDED REL.. | 2,936 | 2,727 | 2,680 | 2,526 | 2,509 |
| | SOLUTION, ORAL | 2 | 9 | 19 | 29 | 3 |
| | TABLET | 3,027 | 3,075 | 2,953 | 2,983 | 2,991 |
| lisdexamfetamine dimesylate | CAPSULE | 93,839 | 94,245 | 96,495 | 99,987 | 108,529 |
| | TABLET,CHEWABLE | 203 | 783 | 1,299 | 1,733 | 2,300 |
| methylphenidate | PATCH, TRANSDERMAL 2.. | 935 | 926 | 1,021 | 872 | 809 |
| | TABLET,DISINTEGRATING.. | | 24 | 33 | 23 | 38 |
| methylphenidate HCl | CAPSULE, ER SPRINKLE, B.. | 10 | 61 | 78 | 77 | 24 |
| | CAPSULE,EXTENDED | 5,002 | 4,384 | 1,401 | 584 | 524 |
| | CAPSULE,EXTENDED | 3,650 | 3,315 | 2,627 | 1,260 | 1,024 |
| | SOLUTION, ORAL | 504 | 604 | 588 | 507 | 504 |
| | SUSPENSION,EXTENDED .. | 914 | 209 | 9 | | |
| | TABLET | 67,033 | 68,067 | 65,490 | 65,875 | 60,525 |
| | TABLET, EXTENDED RELE.. | 6,950 | 5,042 | 4,324 | 2,991 | 2,120 |
| | TABLET, EXTENDED RELE.. | 52,417 | 49,923 | 47,336 | 27,471 | 24,328 |
| | TABLET,CHEW,IR AND ER .. | 384 | 1,298 | 104 | 8 | |
| | TABLET,CHEWABLE | 392 | 570 | 693 | 457 | 108 |

*Source: Maine Office of Behavioral Health*

## Overlapping Prescriptions for Opioids and Benzodiazepines

Nationwide over 30% of overdoses involving opioids also involve benzodiazepines, a type of prescription sedative commonly prescribed for anxiety or insomnia (CDC WONDER, 2021). Common benzodiazepines include diazepam (Valium), alprazolam (Xanax), and clonazepam (Klonipin). Combining opioids and benzodiazepines can be unsafe because both types of drug sedate users and suppress breathing – the underlying cause of overdose fatality – in addition to impairing cognitive functions. Maine's PMP provides clinical alerts to prescribers when a patient has overlapping prescriptions for these two types of medications, and also allows public health officials to track the prevalence of this co-prescribing practice.

**Number of Patient Days with Overlapping Prescriptions for Opioids and Benzodiazepines by Quarter, 2018-2021**

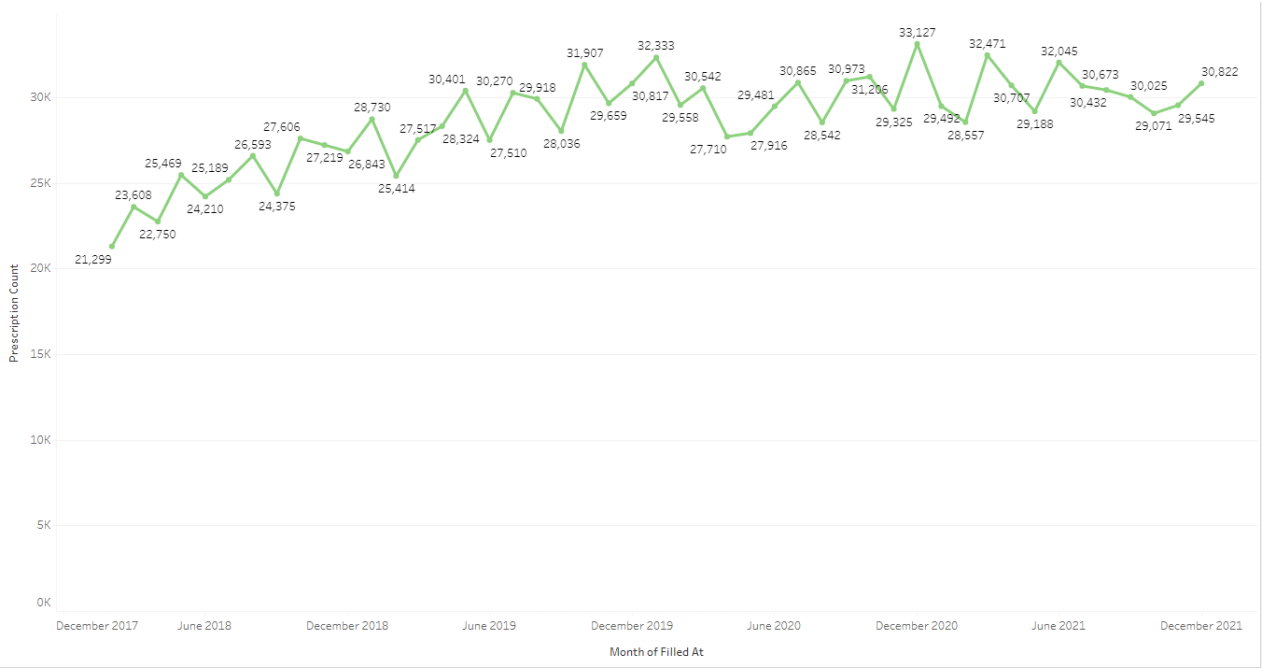



*Source: Maine Office of Behavioral Health*

## Buprenorphine for Treatment of Opioid Use Disorder

The U.S. Food and Drug Administration (FDA) has approved several medications as safe and effective for treatment of opioid use disorder. Buprenorphine is one of the most commonly prescribed medication for opioid use disorder (MOUD). As with all medications used in addiction treatment, buprenorphine is recommended to be prescribed as part of a comprehensive treatment plan that may include counseling and other behavioral therapies to provide patients with a whole-person approach.

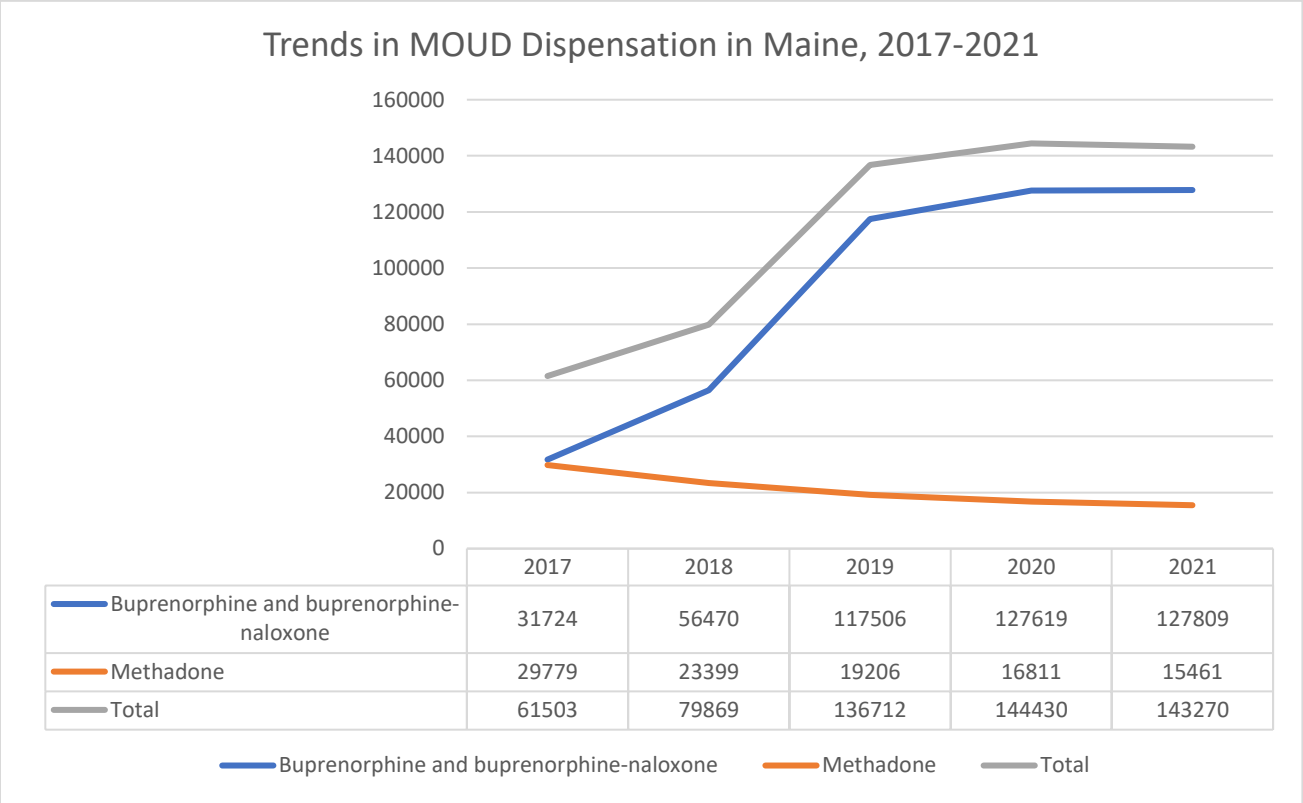
### Number of Buprenorphine Prescriptions Dispensed by Month, 2018-2021




*Note: Only prescriptions for buprenorphine that are filled at a retail pharmacy are entered into Maine's PMP. Prescriptions dispensed at hospital clinics are not required to be reported to the PMP. Source: Maine Office of Behavioral Health*

## FDA-Approved Medications for Opioid Use Disorder (MOUD)

Medication for opioid use disorder (MOUD) is an essential component of the State's public health strategy to combat the overdose epidemic. Prescribing of MOUD has dramatically increased in the past 5 years.




| | 2017 | 2018 | 2019 | 2020 | 2021 |
|---|---|---|---|---|---|
| Buprenorphine and buprenorphine-naloxone | 31724 | 56470 | 117506 | 127619 | 127809 |
| Methadone | 29779 | 23399 | 19206 | 16811 | 15461 |
| Total | 61503 | 79869 | 136712 | 144430 | 143270 |

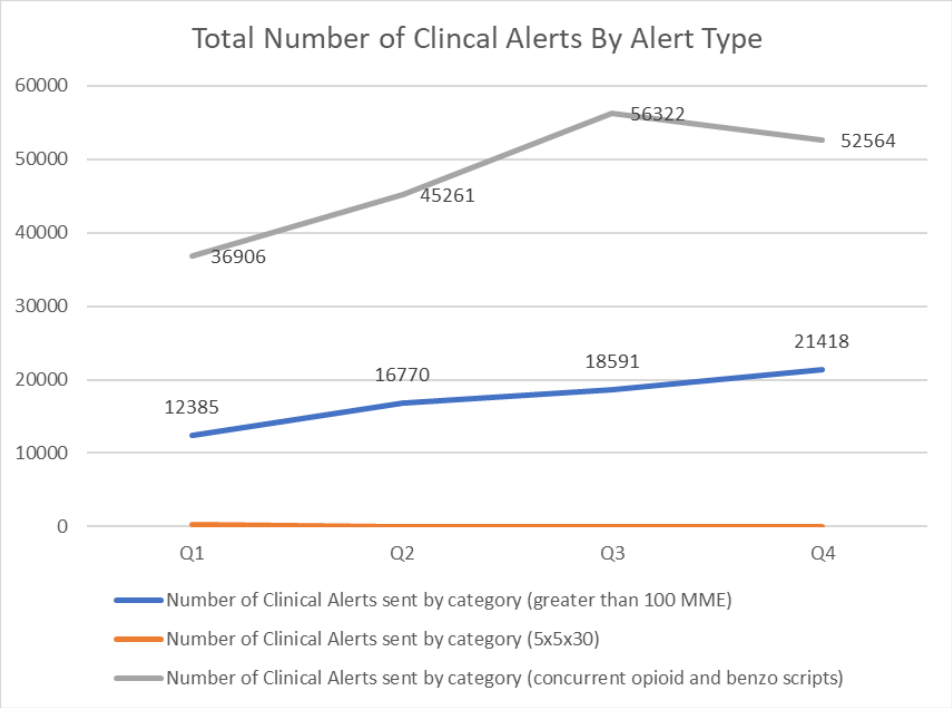
*Source: Maine Office of Behavioral Health*

It is important to note that by statute, Maine's Prescription Monitoring Program collects data on all prescription controlled substances that are dispensed at retail pharmacies. This means that the PMP does not contain data on controlled substances that are dispensed at hospitals, carceral settings, or stand-alone opioid treatment programs (OTPs) like methadone clinics. However, OBH does collect data on MOUD from all licensed methadone clinics in the state as well as the OBH-funded MOUD programs in Maine's prisons and jails. This information is outside of the scope of this report and is not included here; please visit www.mainedrugdata.org for comprehensive data related to SUD treatment in Maine.

## Clinical Alerts

Maine's PMP provides automatically generated alerts to clinicians under certain circumstances where additional clinical attention may be warranted due to increased risk for abuse or overdose:

- Prescription of an opiate medication that exceeds 100 MME/day
- Patient with five or more controlled substance prescriptions from different providers dispensed at five or more pharmacies within 30 days (5x5x30)
- Patient with concurrent prescriptions for opiate and benzodiazepine medications




*Source: Maine Office of Behavioral Health*

## Electronic Prescribing

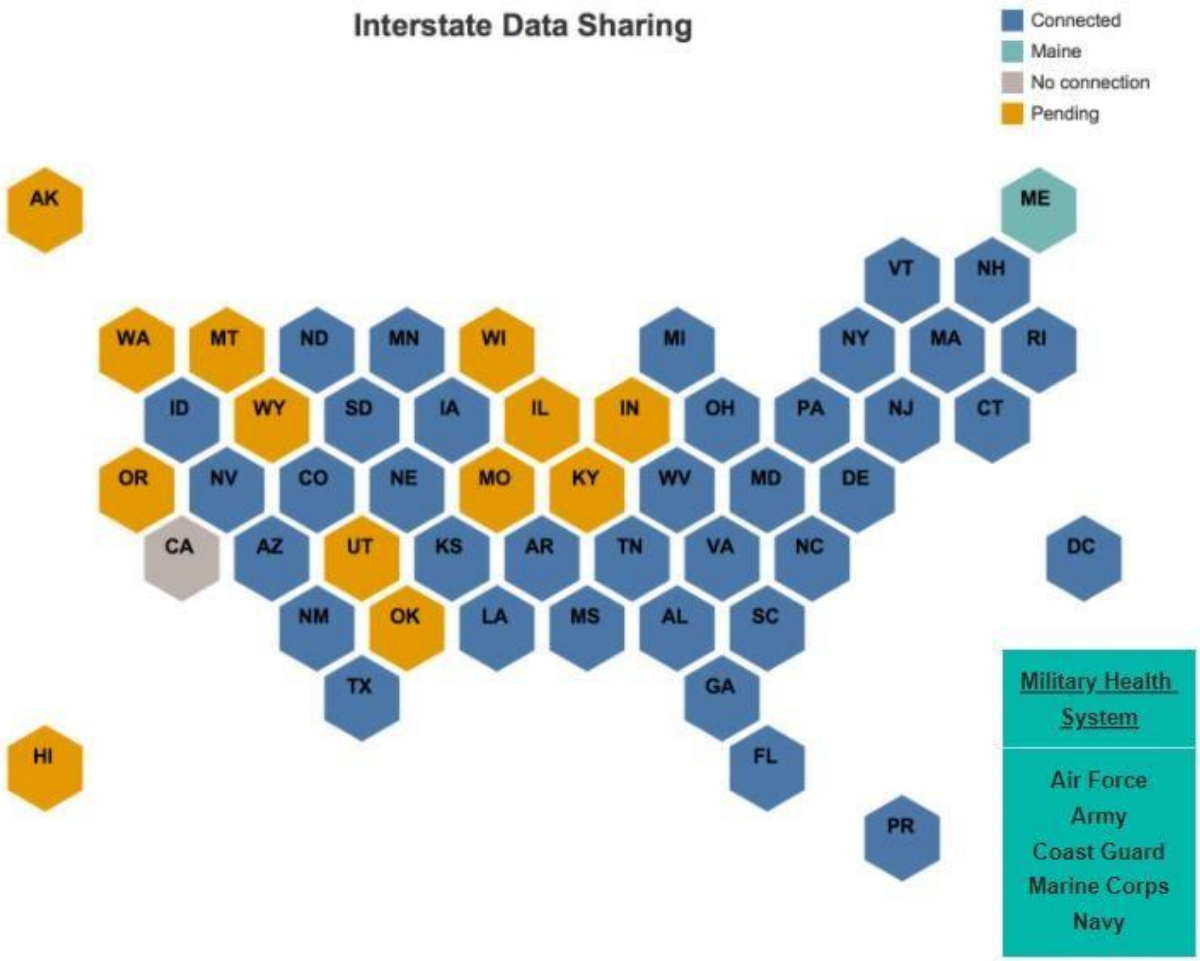
As of August 1, 2017, prescribing clinicians in Maine are required to prescribe any opioid medication by electronic means. This measure is intended to enhance the ability of the State to electronically track prescriptions of opiate medications and avert potential misuse or diversion.

### Opioid Medication Prescriptions Issued Electronically vs. Non-Electronically, 2015-2021


*Source: Maine Office of Behavioral Health*

## Sharing PMP Data with Other States

The following map represents the implementation of PMP data-sharing agreements with other states and federal health systems. Maine is currently connected to and sharing data with 34 other PMPs, and an additional 13 data sharing relationships are pending at this time. Each state entity that is enabled to share data through the PMP data sharing module utilized by Maine has been contacted and regular follow ups will continue to be scheduled until a connection is established.




The Canadian province of New Brunswick has recently contracted with PMP software vendor NIC to develop a prescription drug monitoring program. Maine's Office of Behavioral Health has bimonthly calls with New Brunswick to facilitate sharing of prescription drug monitoring data.

## Future Directions

Maine has seen a significant reduction in the prescription of opioid medications and overdoses attributable to pharmaceutical opioids over the last five years. However, appropriate stewardship of prescribed controlled substances – including provider education to encourage appropriate prescribing behavior and public messaging campaigns targeted at secure storage and dis posal of medications - continues to be an important component of OBH substance use disorder (SUD) prevention efforts.

The Office of Behavioral Health (OBH) administered PMP has undergone substantial change in 2021. After making the determination to re-engage with its long-time PMP software vendor, Bamboo Health (formerly Appriss Health), the Department allocated significant resources towards leveraging the PMP as a public health improvement, intervention, and outreach mechanism with the goal of fully realizing the potential of the PMP as a mechanism to prevent morbidity and mortality due to substance misuse. In 2021, the Department launched and began making progress on five initiatives that are critical to the achievement of this goal:

- Integrate PMP data with other datasets to improve understanding of interrelated factors that contribute to the risk of prescription misuse, addiction, and overdose
    - **Secured $1.6m Harold Rogers grant from the Bureau of Justice Assistance**
- Increase outreach and educational opportunities for PMP users to help maximize participation and optimal use of the system
    - **Successfully applied for federal grant funding for OBH PMP team expansion**
    - **Hired an experienced physician/public health researcher into PMP Clinical & Policy Advisor role**
- Utilize aggregated, deidentified PMP data to define prescribing patterns by county and/or public health district to better target provider education and prevention efforts
    - **Adding dedicated PMP Public Health Data Analyst to OBH PMP team**
- Invest in PMP system enhancements that will encourage provider uptake and provide greater functionality and clinical decision-making support at the point of care
    - **Department-funded Statewide Gateway electronic health record (EHR) integration initiative implementing in 2022**
    - **Integration of PMP with Maine's health information exchange (HIE), HealthInfoNet completed in January 2022**
- Further develop advanced analytics capabilities within the PMP to identify emerging public health concerns, including concurrent prescription of benzodiazepines, opioids, and stimulants
    - **BambooHealth Advanced Analytics Dashboards, implementation ongoing**

The Department is in the process of implementing a variety of additional PMP modules to enhance the functionality of the core PMP system. The purpose of this implementation is to apply advanced analytics tools and data science methodologies to the wealth of data held within the PMP – allowing a more proactive approach to preventing substance misuse, addiction, and overdose.

- **Prescriber Outlier Model** – This module allows the PMP Team to analyze prescribing habits and compare outlier prescribers' behavior to that of their peers, with the goal of proactively addressing problematic prescribing practices

that can increase patients' risk of addiction and overdose – such as overlapping prescriptions for opioids and benzodiazepines, opioid prescriptions that exceed 100 MME/day written for inappropriate treatment types, and younger patients being prescribed opioids for chronic pain.

- **ERVive** – This module facilitates integration of disparate data sources into PMP patient data records to improve clinician decision making at the point of care.
    - Emergency Room visit information (e.g. for non-fatal overdose, which is an important predictor of risk of future overdose)
    - Hospital Admission data
    - Emergency Medical Services (EMS; e.g. non-fatal overdose)
    - Drug Court participation
    - Other SUD treatment data (e.g. methadone treatment for OUD, which does not appear in the PMP prescription history)
    - Decedent Data - notifies the prescriber/dispenser that a patient has passed (to prevent inappropriate medication refills)
- **Organizational Management** – Allows Chief Medical Officers, Medical Directors, and other Medical Supervisors in a Hospital, FQHC or private practice to monitor and view their prescribers' prescription histories by adding their own providers within the PMP system. This allows supervising clinicians to have greater insight into the prescribing habits of those they supervise, thus increasing accountability and opportunity to intervene when prescribing habits do not fall within clinical best practice guidelines.
- **Mandatory Use** – Gives the PMP Team improved analytic capabilities to monitor individual prescriber compliance with PMP statute and best practice. Clinicians who are identified as not checking the PMP as required prior to issuing a prescription for a controlled substance will receive reminders, and if appropriate, notifications may be sent to supervising clinicians and/or medical licensing boards.