



PRESCRIPTION DRUG MONITORING PROGRAM

2023 Annual Report

Arkansas Department of Health

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Contents

Introduction	Page
Data Disclaimer	3
 Prescription Drug Monitoring Program Usage	
User Information	4
Usage Data	5
Interstate Data Sharing	6
Multiple Provider/Dispenser Incidence.....	7
 Prescription Data	
All Controlled Substance and High-Risk Drug Class Dispensations	8-9
Other Controlled Substance Dispensations	10
Provider Prescribing by Drug Class	11
Dispensations by Prescription Drug	12-13
Dispensations by Age and Sex	14
 Opioid Data	
County Rates	15
Opioid Potency	16
Prescription Duration	17
Buprenorphine	18
Buprenorphine County Rates	19
 Other Prescription Trends	
Overlapping Prescriptions	20
High-Risk Opioid Prescriptions	21
 Acknowledgements	22

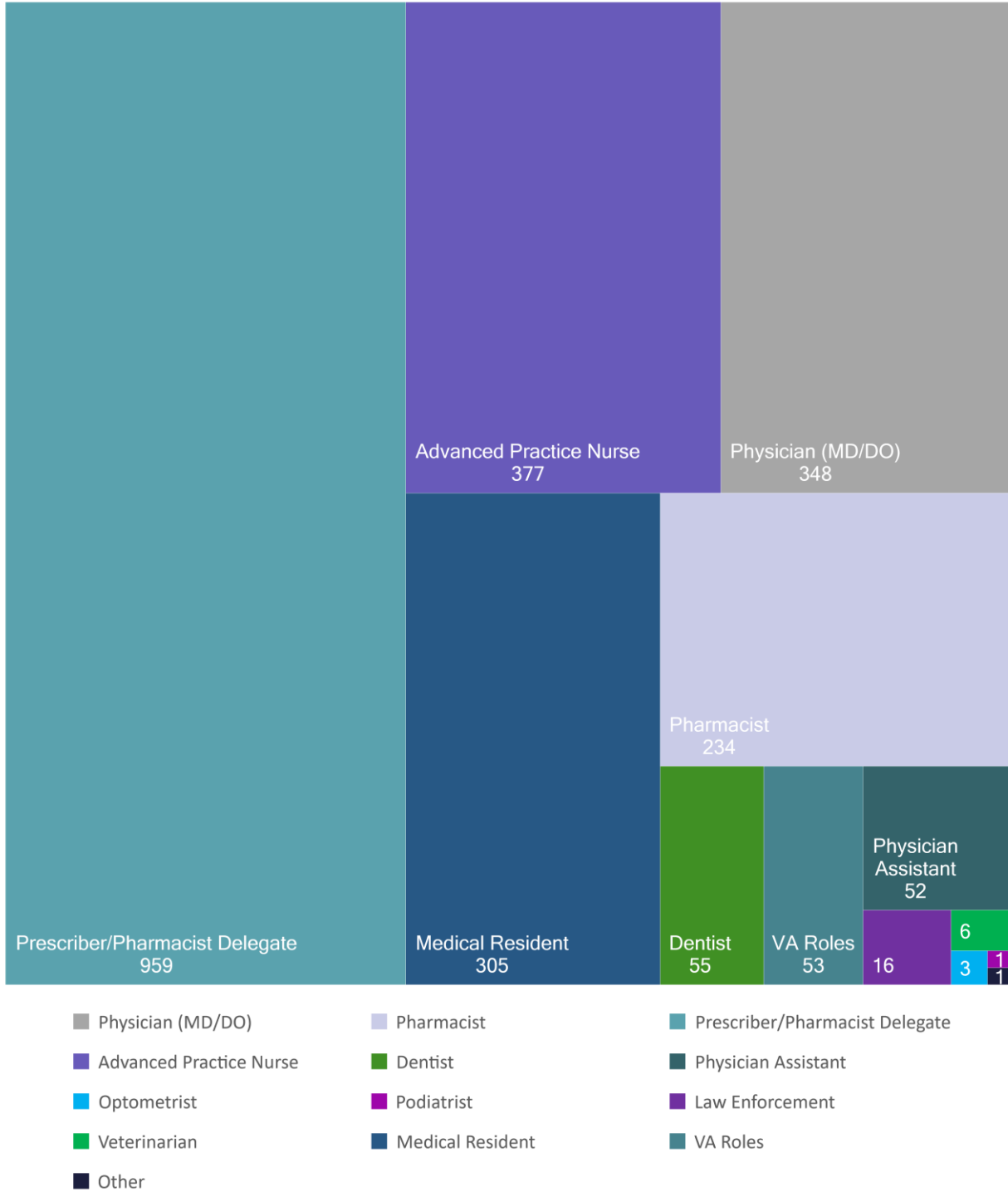
Data Disclaimer

The 2023 Prescription Drug Monitoring Program (PDMP) Annual Report was prepared by merging Arkansas PDMP data with the RxNorm standard clinical drug vocabulary produced by the National Library of Medicine to determine drug classifications. Previous Arkansas PDMP Annual Reports used the Center for Disease Control and Prevention (CDC) Opioid National Drug Codes (NDC) and Oral Morphine Milligram Equivalent (MME) Conversion file, which was last updated in 2020 and officially discontinued by the CDC in 2023. The CDC now recommends use of the RxNorm library.

This updated method of drug classification is more accurate than previous years. As such, data in this Annual Report may appear significantly different than past reports. This discrepancy is due to more precise determination of drug class and may limit direct comparisons to previous years.

User Information

Figure 1: New Registered PDMP Accounts, Arkansas 2023.

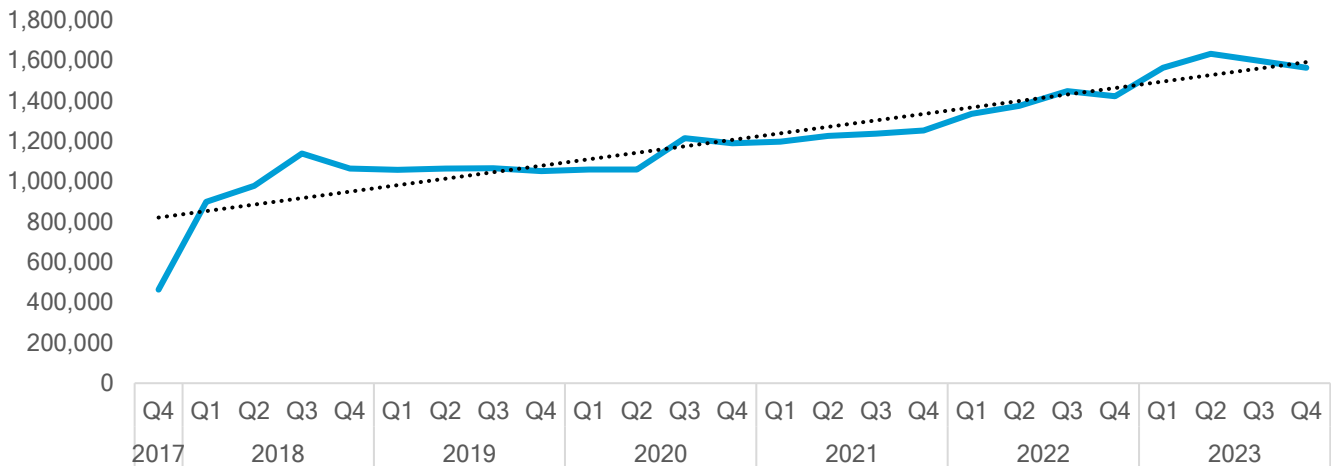


Source: Tableau, Bamboo Health

PDMP Usage

Queries by Arkansas users of the PDMP have been trending up since the web portal began tracking usage in late 2017.

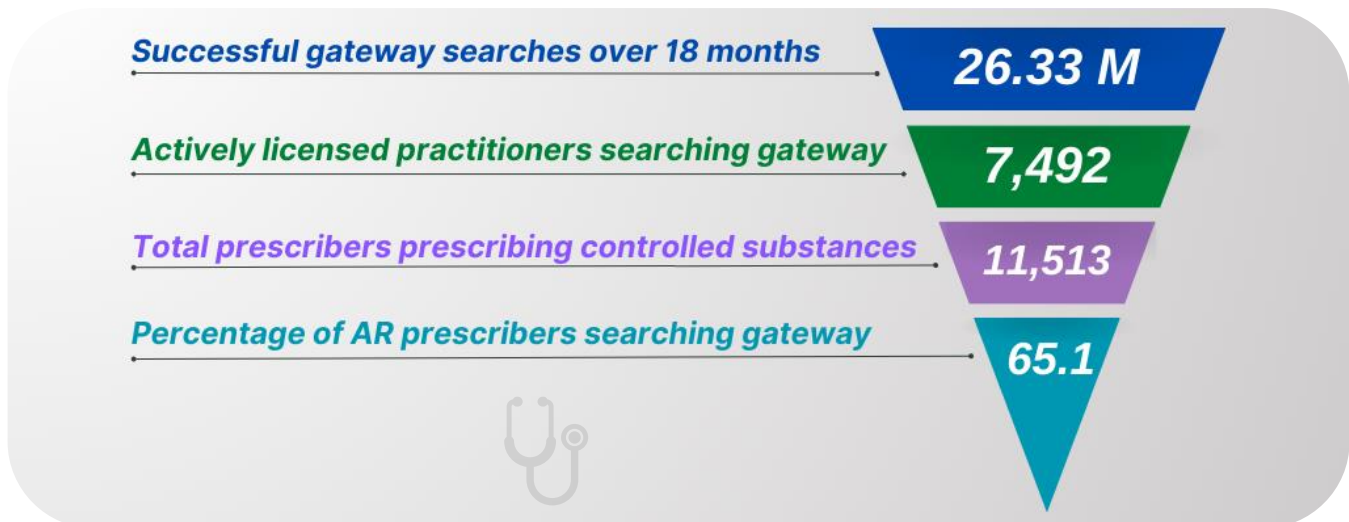
Figure 2: Total PDMP Queries by AR Users, Arkansas 2017-2023.



Source: Tableau, Bamboo Health

The Arkansas PDMP has continued Gateway integration of the PDMP to electronic health records, pharmacy management systems, and health information exchanges. At the end of 2023 over 65% of providers prescribing controlled substances were searching using the Gateway integration, a nearly 24% increase from the end of 2022.

Figure 3: AR PDMP Users Searching Integrated Gateway, Arkansas 2023.

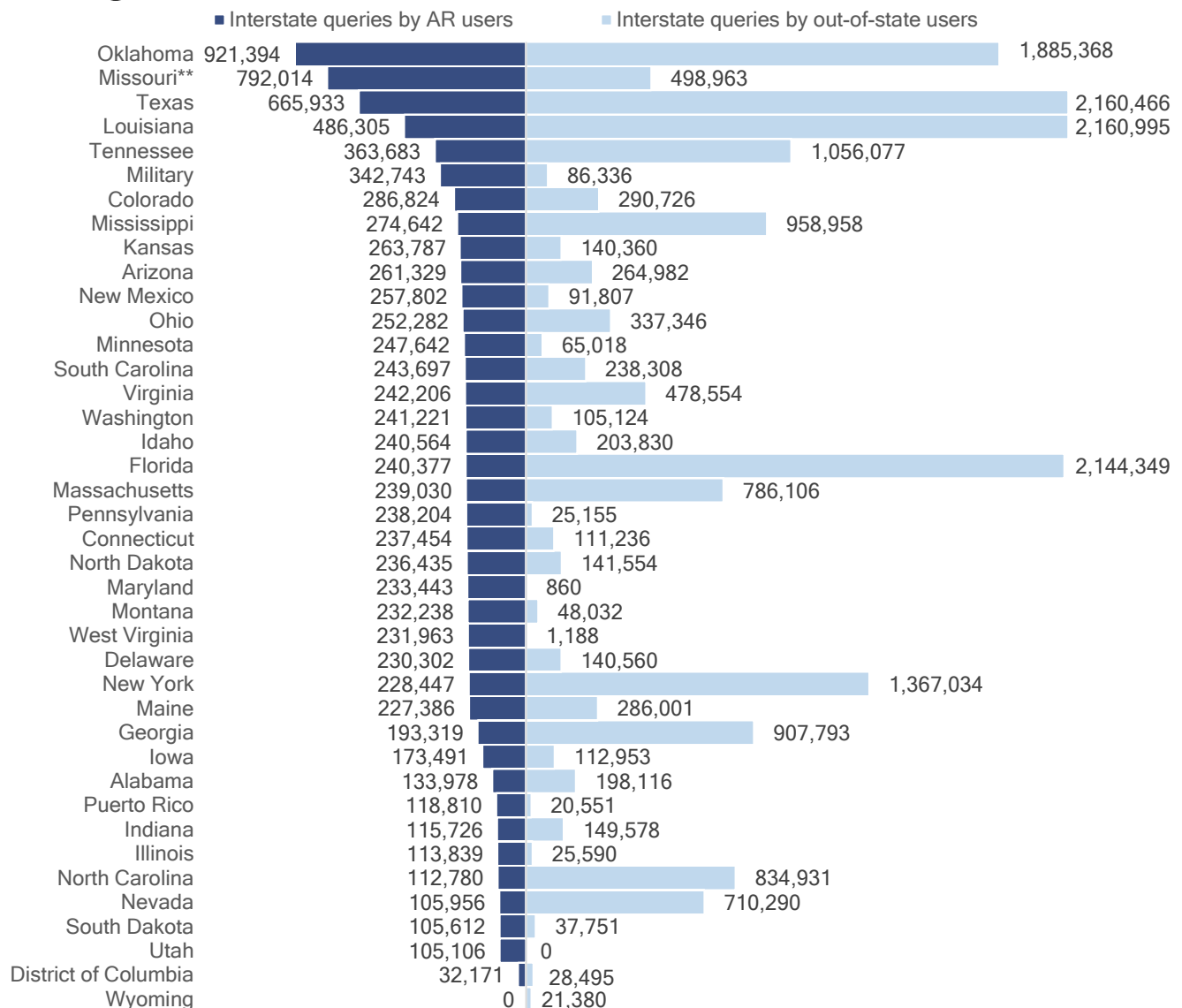


Source: Tableau, Bamboo Health

Interstate Data Sharing

Arkansas currently has PDMP data sharing agreements with 38 states, the Military Health Systems, Puerto Rico, and Washington DC. Figure 4 shows the interstate queries from 2023. The left side of the chart reflects queries by Arkansas users accessing other states data, and the right side of the chart reflects queries by out-of-state users accessing Arkansas data. A query does not indicate that a patient record was found and returned.

Figure 4: Interstate query* counts between Arkansas and PDMP data sharing locations, 2023.



Source: Tableau, Bamboo Health

*Includes only queries with states using the PMP InterConnect system. Does not include Gateway requests.

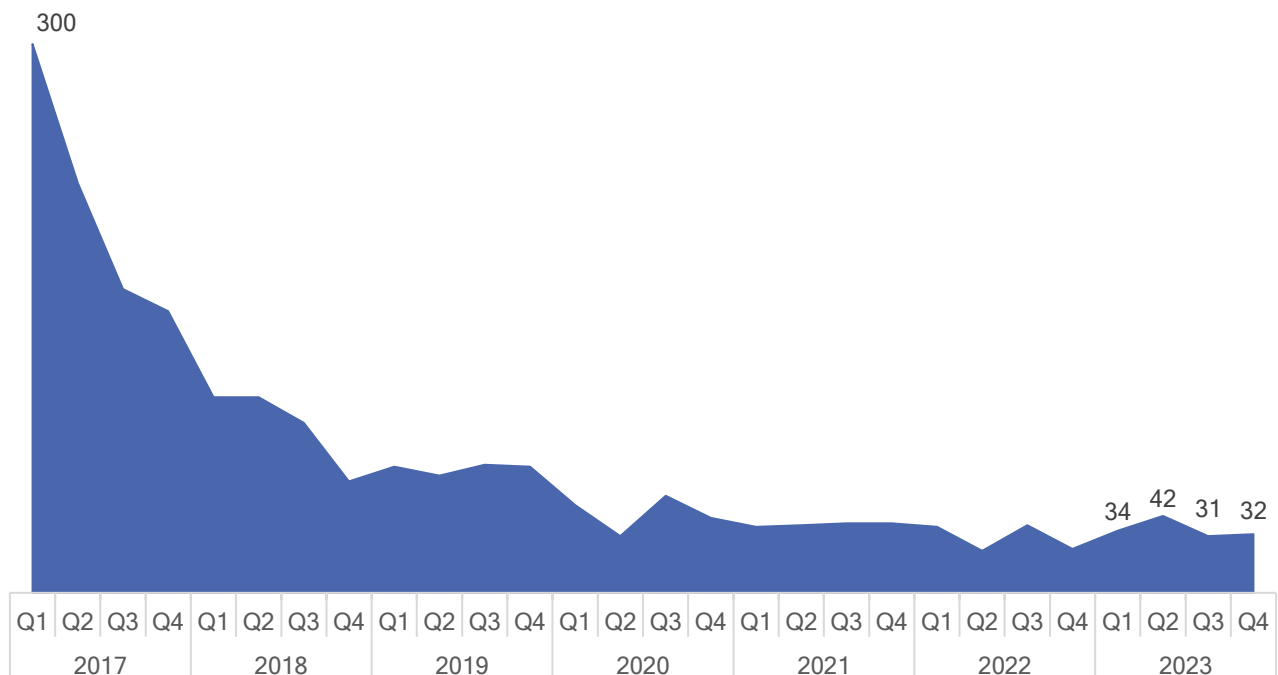
**On December 13, 2023, the Saint Louis County PDMP was discontinued and the Missouri Statewide PDMP activated. Due to limitations in Missouri law, interstate data sharing is not allowed.

Multiple Provider/Dispenser Incidence

The PDMP will alert users if there are patients that seem to have a recent history of controlled prescriptions from multiple providers. The practice of seeking prescriptions for the same medicine or drug class from multiple providers is known as doctor shopping. In Arkansas, the threshold for flagging potential doctor shopping is when a patient fills prescriptions from five different providers at five different pharmacies within 90 days. Once this threshold is met, the PDMP will send a clinical alert to all users associated with the patient.

Arkansas began tracking doctor shopping behavior in 2017. Since then, there has been an 89% decrease in flagged individuals. In 2023, there was a slight uptick from an all-time low of 23 individuals in Quarter 2 of 2022.

Figure 5: Individuals with Prescriptions from Five or More Prescribers Dispensed at Five or More Pharmacies per Quarter, Arkansas 2017–2023.



Source: PMP AWARE, Bamboo Health

Scheduled II-V Controlled Substance Dispensations

Figure 6 shows the five-year trend for all schedule II-V prescriptions in Arkansas. These numbers include prescriptions for medications not captured by the five highest risk therapeutic drug classes, such as testosterone, ketamine, and pregabalin. Scheduled drug prescriptions decreased sharply between 2019 and 2021 but have remained fairly stable since.

The five controlled drug classes with the highest risk for negative health impacts from abuse dispensed in Arkansas are opioids, benzodiazepines, stimulants, sedative/hypnotics, and muscle relaxants. Figure 7 shows that there has been a decrease over the past 5 years in all these drug classes except for stimulants, which continue to increase nationally.

DRUG CLASSES

Opioids: Medications used primarily to treat pain. This class of drugs includes hydrocodone, oxycodone, morphine, and others. Opioids also include buprenorphine, a medication typically used to treat opioid use disorder.

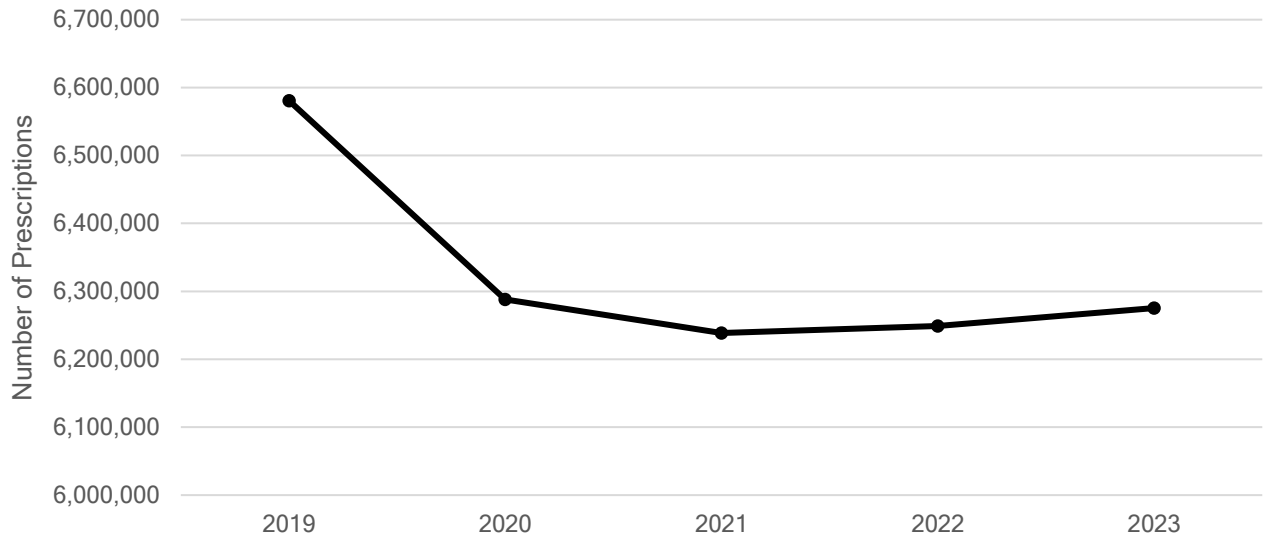
Benzodiazepines: Medications often prescribed for anxiety, panic attacks, insomnia, seizures, and muscle spasms. This class includes alprazolam, diazepam, and others.

Stimulants: Medications commonly prescribed to treat attention deficit hyperactivity disorder and narcolepsy. These drugs include methylphenidate and dextroamphetamine along with phentermine, which is used to treat obesity.

Sedative/Hypnotics: Medications used to treat insomnia, including zolpidem, zaleplon and eszopiclone.

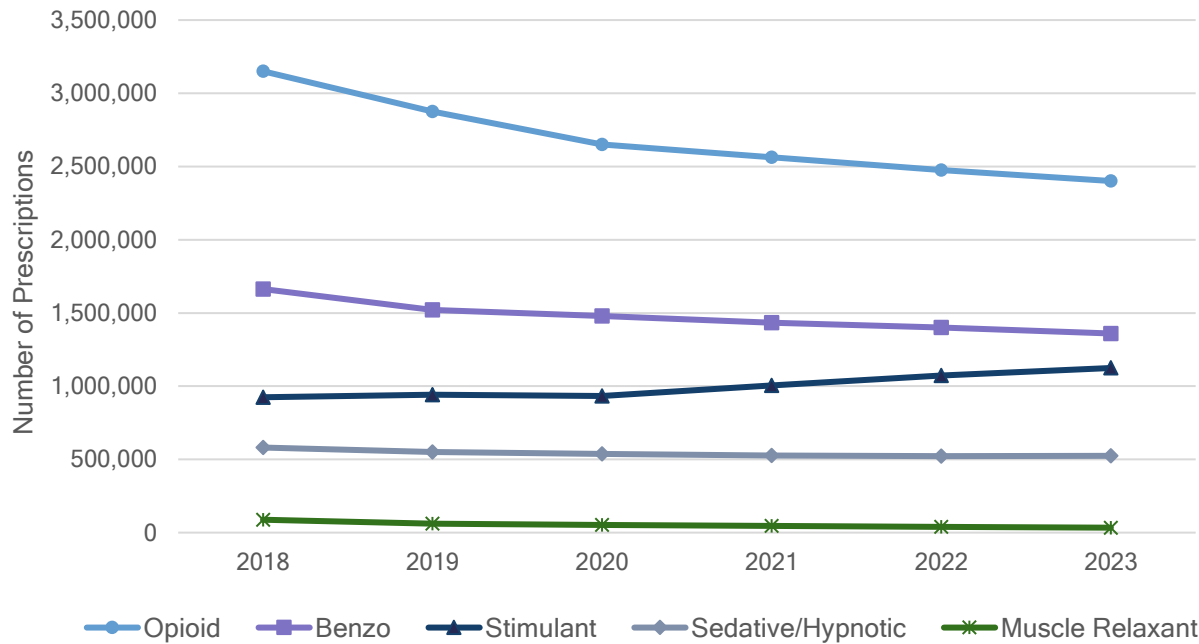
Muscle Relaxants: Medication prescribed to treat muscle-related symptoms, like spasticity and spasms. The only scheduled drug in this class is carisoprodol.

Figure 6: All Schedule II-V Drug Prescriptions per Year for AR Residents by AR Prescribers, Arkansas 2019-2023.



Source: AR PDMP merged with RxNorm
Includes all dosage forms - liquids, patches, tablets, capsules, suspensions, etc.

Figure 7: Top Five High Risk Drug Class Prescriptions per Year for AR Residents by AR Prescribers, Arkansas 2019-2023.



Source: AR PDMP merged with RxNorm
Includes all dosage forms - liquids, patches, tablets, capsules, suspensions, etc.
Buprenorphine removed

OTHER DRUG CLASSES

Other commonly prescribed substances outside of the five highest risk drug classes include anabolic steroids, GABA analogues, and dissociative anesthetics.

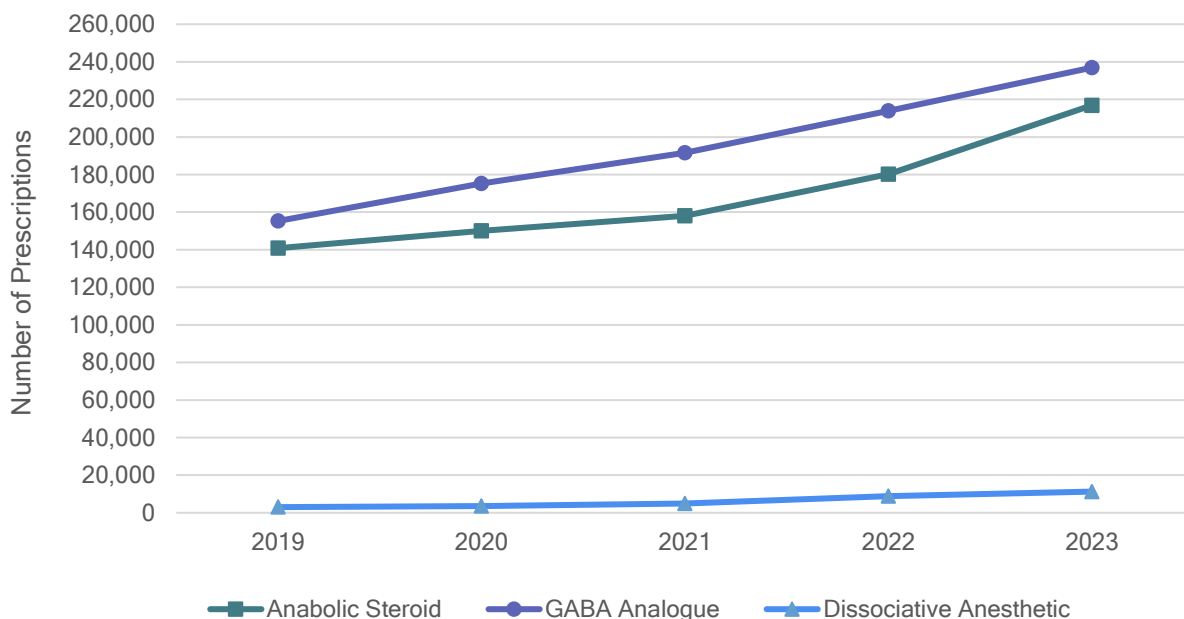
Anabolic Steroids: Medications often prescribed to patient with low hormone levels, most commonly low in testosterone. This class includes testosterone and methyltestosterone.

GABA Analogues: A compound which is an analogue or derivative of the neurotransmitter gamma-Aminobutyric acid (GABA). These are medications utilized to treat pain caused by nerve damage. The only scheduled drug in this class is pregabalin, also known by the brand name Lyrica.

Dissociative Anesthetics: Medications that contain ketamine or esketamine. They are used for general anesthesia and frequently prescribed for depression, managing suicidal ideation, and pain management.

In Arkansas, there have been increases among all three of these drug classes over the last five years. GABA analogues and anabolic steroids both had over 200,000 dispensed prescriptions in 2023 compared to 140,000-160,000 prescriptions in 2019. Dissociative anesthetics increased 3.7 times between 2019 and 2023, increasing from 3,000 prescriptions to over 11,000.

Figure 8: Other Scheduled Drug Class Prescriptions per Year for AR Residents by AR Prescribers, Arkansas 2019-2023.



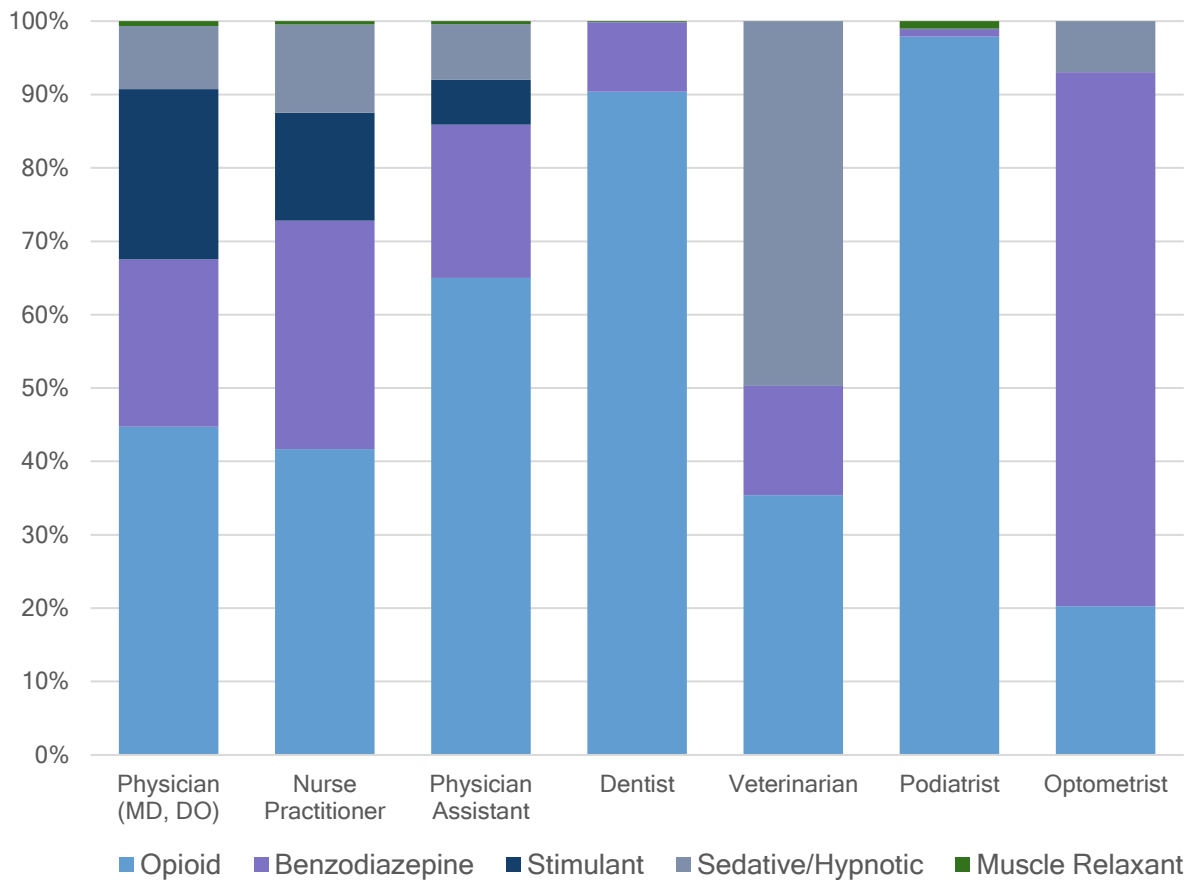
Source: AR PDMP merged with RxNorm
Includes all dosage forms - liquids, patches, tablets, capsules, suspensions, etc.

Provider Prescribing by Drug Class

Many different provider types prescribe controlled substances in their practice. Professionals that commonly prescribe drugs reported to the PDMP include physicians (both MD and DO), nurse practitioners, physician assistants, dentists, veterinarians, podiatrists, and optometrists.

In 2023, the class with the highest percentage of prescriptions across nearly all provider types were opioids followed by benzodiazepines. The exceptions were optometrists, who prescribed benzodiazepines more frequently than opioids, and veterinarians, who most commonly prescribe sedative/hypnotics.

Figure 9: Most Frequently Prescribed High Risk Drug Classes by AR Providers to AR Residents, Arkansas 2023.

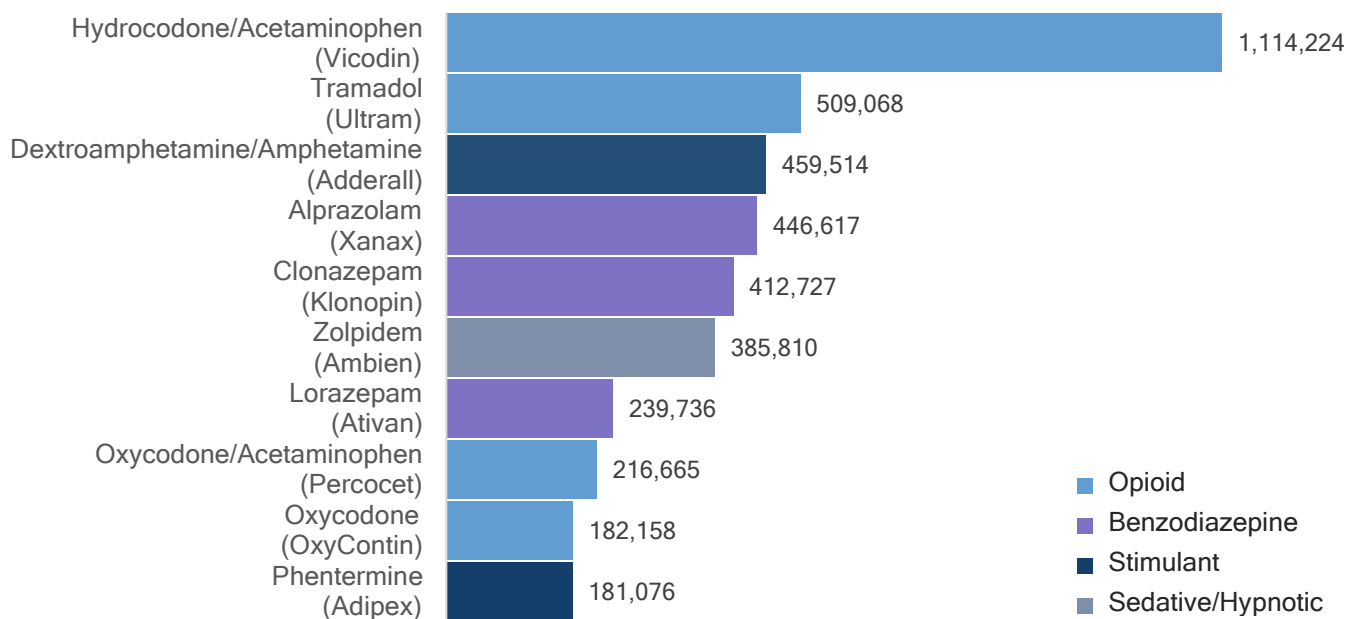


Source: AR PDMP

Dispensations by Prescription Drug

The 10 controlled substances most commonly dispensed and authorized by Arkansas providers to Arkansas residents are shown below. The list is dominated by hydrocodone/acetaminophen, and includes a mixture of opioids, benzodiazepines, stimulants, and sedative/hypnotics. Figure 10 shows the commonly dispensed generic drug names, an example of a brand name, the drug class, and the number of prescriptions filled in 2023.

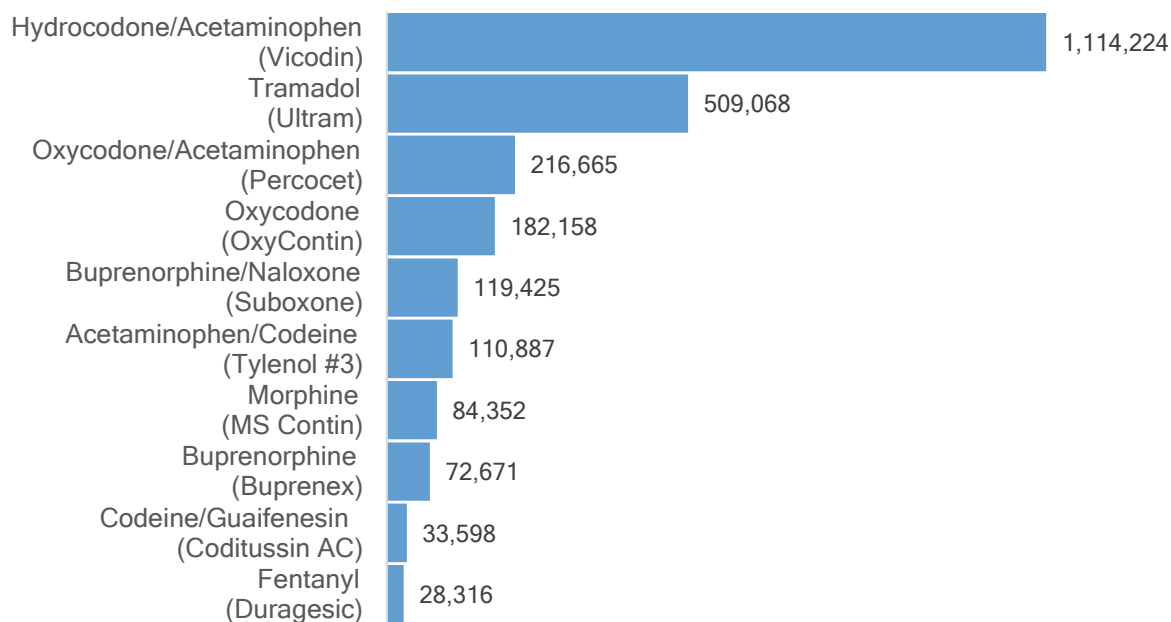
Figure 10: Most Frequently Prescribed Controlled Prescription Drugs, Arkansas 2023.



Source: AR PDMP merged with RxNorm
Prescriptions written by AR prescribers to AR residents

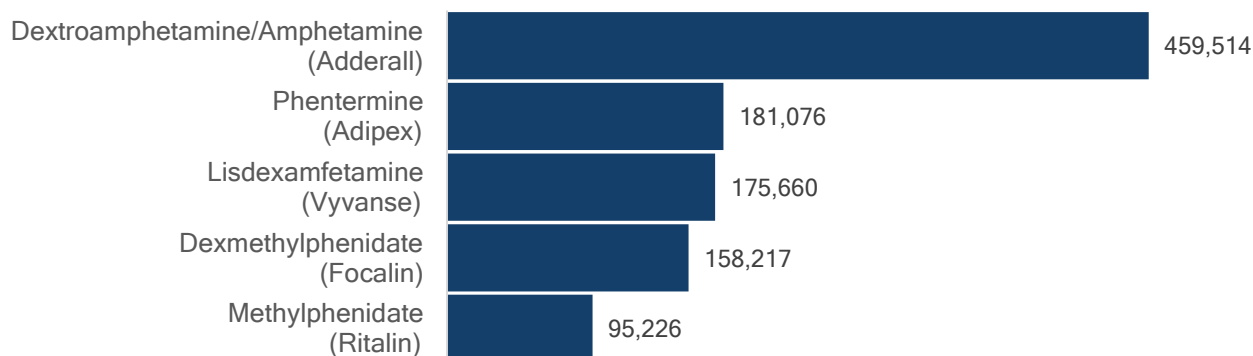
Figures 11 and 12 show the most dispensed opioids and stimulants in 2023, depicting the generic drug names, an example of a brand name, and the number of prescriptions filled.

Figure 11: Most Frequently Prescribed Opioids, Arkansas 2023.



Source: AR PDMP merged with RxNorm
Prescriptions written by AR prescribers to AR residents

Figure 12: Most Frequently Prescribed Stimulants, Arkansas 2023.

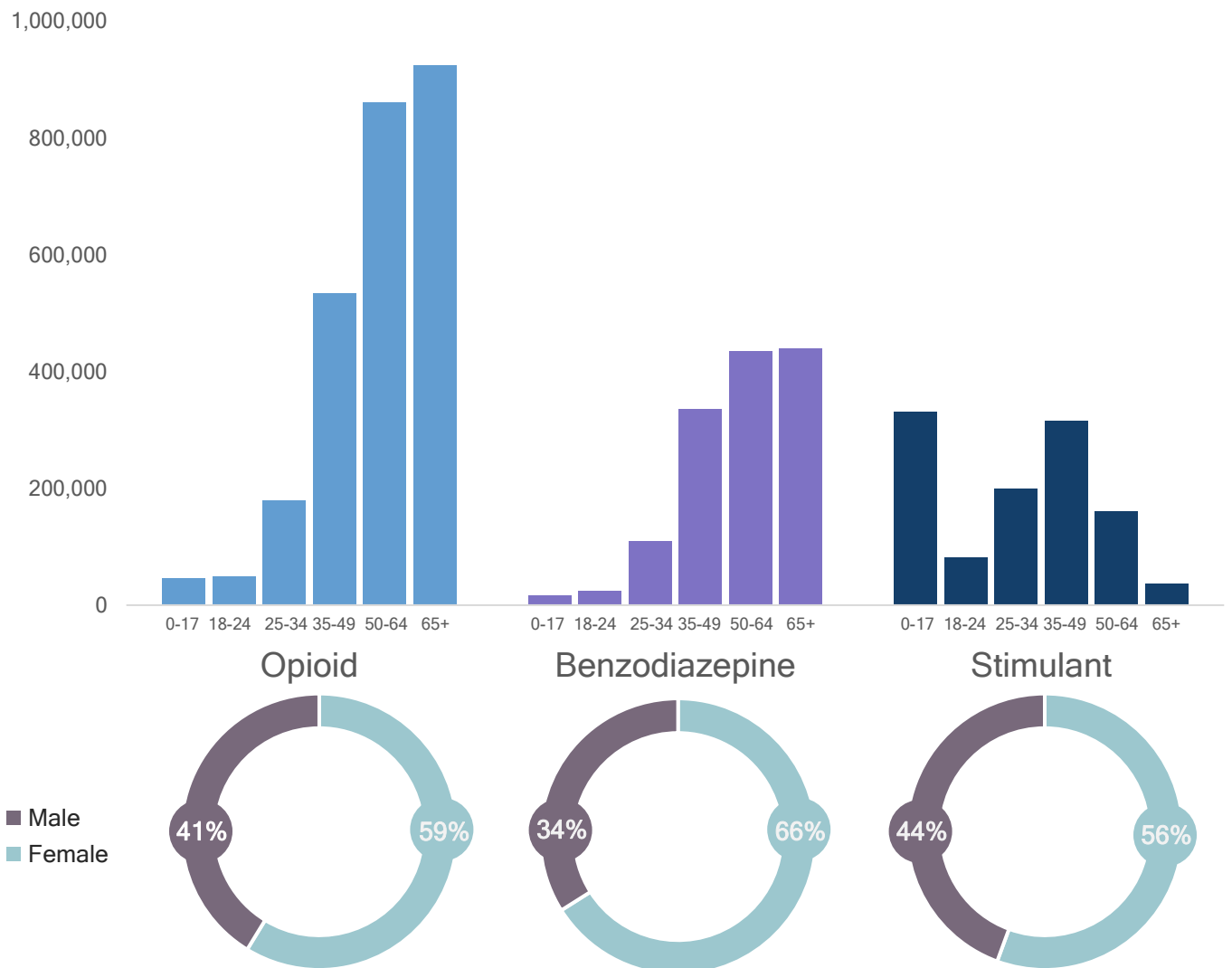


Source: AR PDMP merged with RxNorm
Prescriptions written by AR prescribers to AR residents

Dispensations by Age and Sex

Drug class prescribing varies by the age and gender of the patient. In Arkansas, the majority of prescriptions across all classes were prescribed to females. In 2023, the age distribution for stimulants was distinctly different compared to opioids and benzodiazepines with the highest number of stimulant prescriptions for minors followed by the second highest among those age 35-49.

Figure 13: Opioid, Benzodiazepine, and Stimulant Prescriptions by Age and Sex, Arkansas 2023.

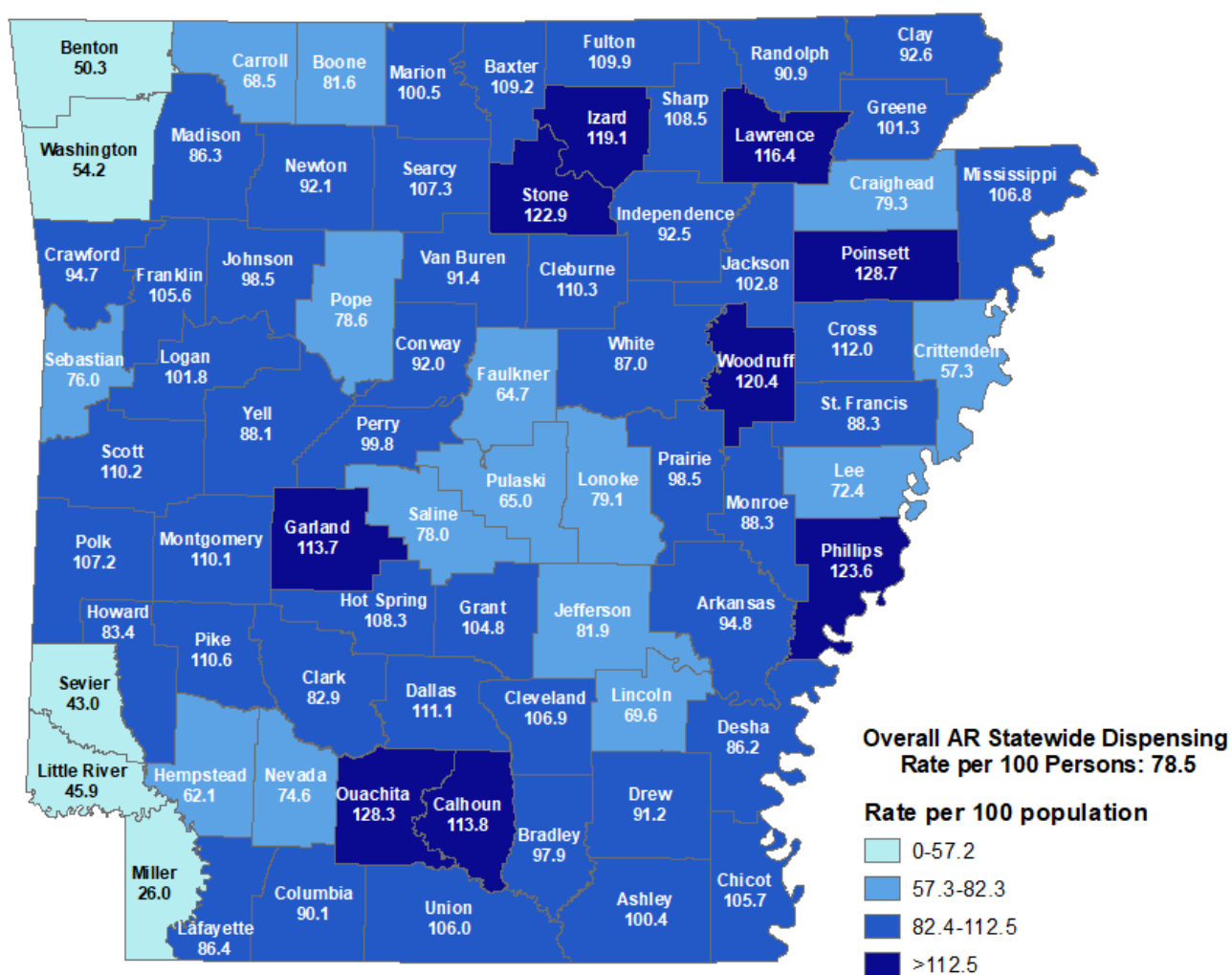


Source: AR PDMP merged with RxNorm Prescriptions written by AR prescribers to AR residents

Opioid Dispensing County Rates

The opioid dispensing rate describes the number of opioid prescriptions dispensed per 100 people. According to the CDC, the national average dispensing rate in 2022 was 39.5 opioid prescriptions per 100 people. In 2023, Arkansas had an opioid dispensing rate of 78.5. Individual counties ranged from 26.0 (Miller County) to 128.7 (Poinsett). There are 32 counties in Arkansas that had dispensing rates over 100, which means that more than one opioid prescription per person was dispensed in 2023.

Figure 14: Opioid Dispensing Rates per 100 People per County, Arkansas 2023.



Excludes buprenorphine-containing products approved for treatment of OUD.
 Location is based on county of patient address.
 Prescriptions written by AR prescribers to AR patients.

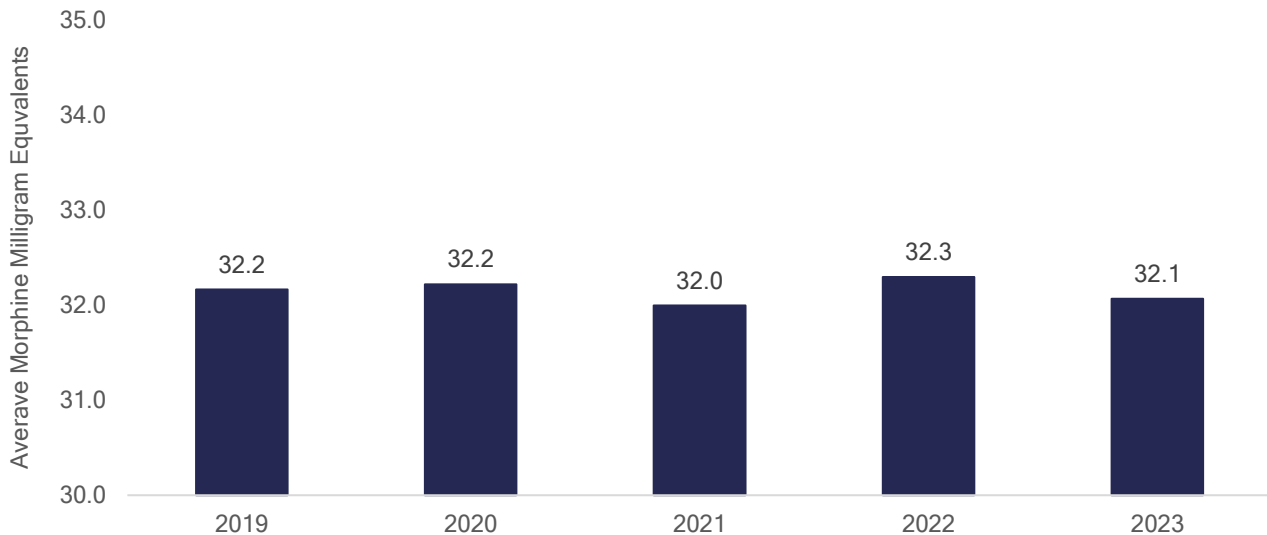
Source: AR PDMP merged with RxNorm

Opioid Potency

Opioid potency is typically discussed in morphine milligram equivalents (MME), or the amount of morphine that an opioid dose is equal to. This allows for a comparison across doses of different opioids and can be used as an indicator for overdose risk or abuse potential. The CDC prescribing guidelines recommend that prescribers use the lowest effective dosage of an opioid medication, and use caution when increasing overall dosage for a patient above 50 MME/day.

The average daily MME's per person for the past five years in Arkansas has consistently remained 32 since 2019.

Figure 15: Average MME per Person per Day by Year, Arkansas 2019-2023.



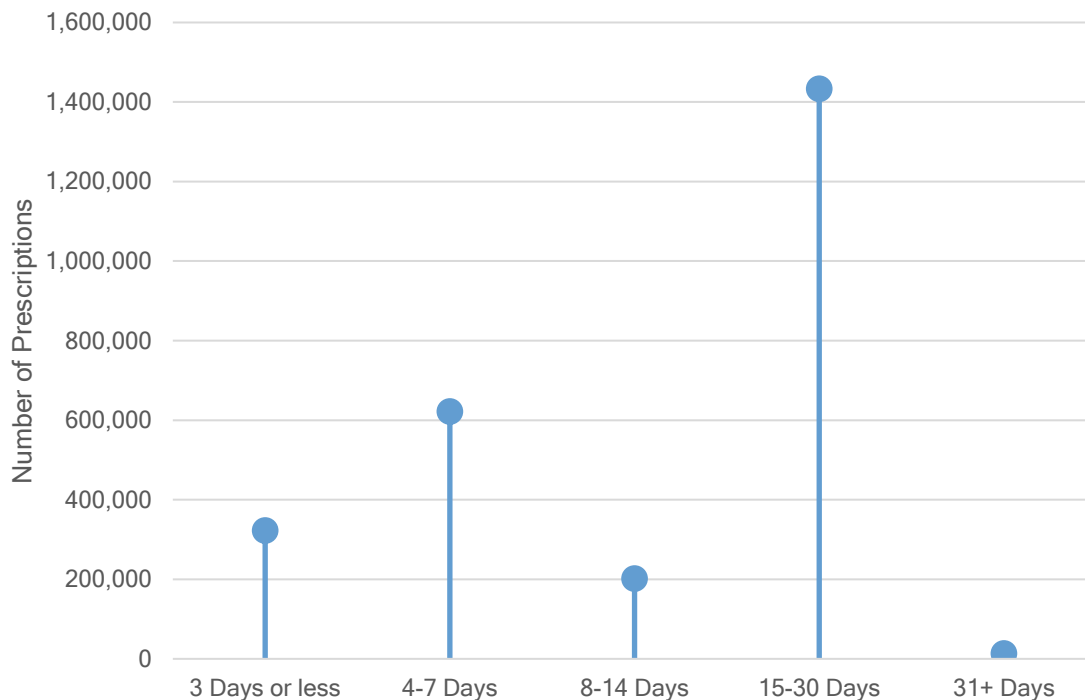
*Source: AR PDMP merged with RxNorm
Prescriptions written by AR prescribers to AR residents
Data exclude buprenorphine-containing products approved for treatment of OUD*

Opioid Prescription Duration

In 2022, the CDC released updated guidelines for prescribing opioids for chronic pain in an effort to encourage safe opioid prescribing practices. The guidelines state that when treating acute pain, the duration of the prescription should be no longer than needed for the pain, which is typically three days or less, and that longer than 7 days is rarely needed. The CDC encourages clinicians to regularly evaluate the efficacy of long-term opioid treatments for their patients.

Figure 16 shows the prescription durations for opioids prescribed in 2023 by Arkansas providers for Arkansas residents. There were far more prescriptions with a duration of 15-30 days than all other lengths of time combined in 2023.

Figure 16: Duration of Opioid Prescriptions for AR Residents by AR Prescribers, Arkansas 2023.



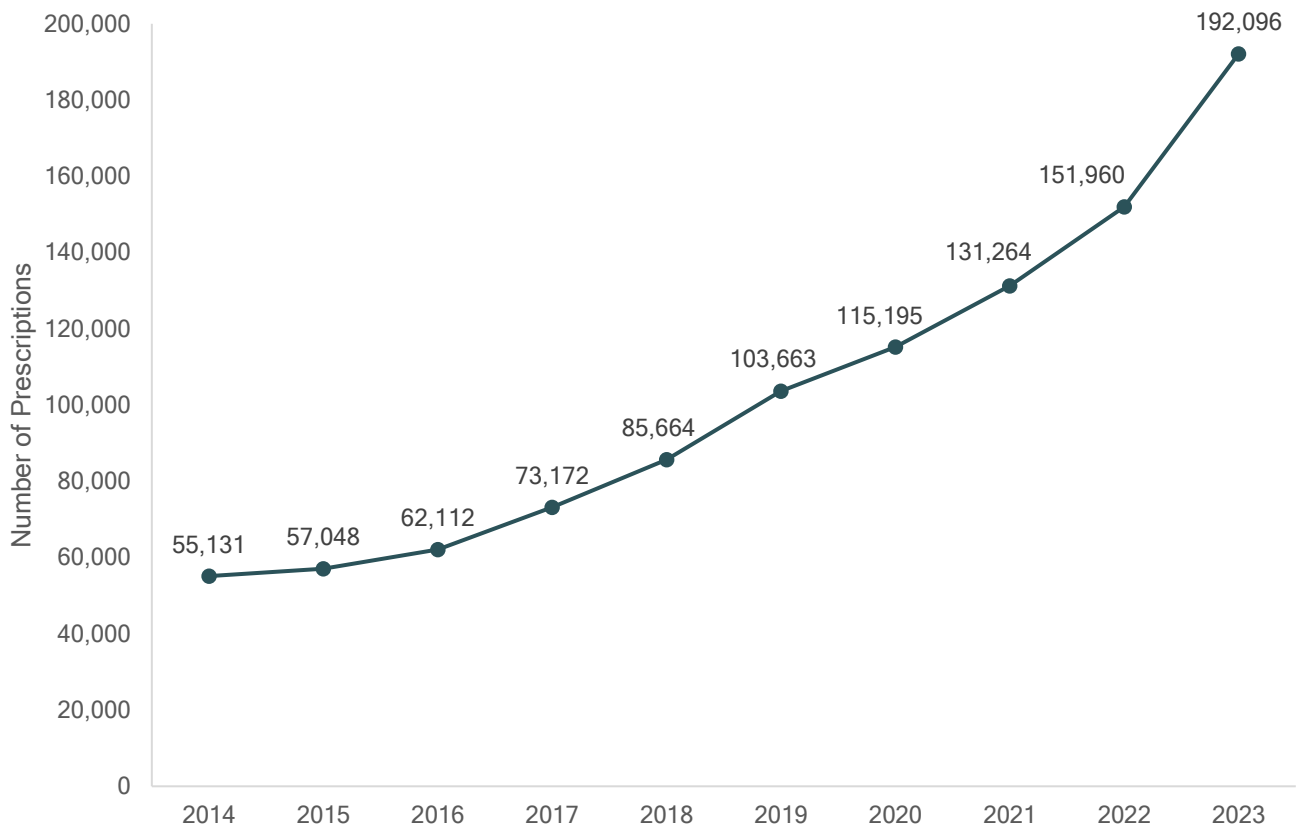
Source: AR PDMP merged with RxNorm Prescriptions written by AR prescribers to AR residents

Buprenorphine

Buprenorphine is an opioid partial agonist that suppresses or reduces cravings for opioids and can be prescribed to treat Opioid Use Disorder (OUD). Buprenorphine is commonly combined with naloxone for treatment of OUD. Some buprenorphine products, including Belbuca and Butrans, are typically prescribed for treating pain and are not approved for treatment of OUD.

Since the Arkansas PDMP began tracking prescriptions in 2014, prescriptions for buprenorphine products have been steadily rising. In 2023, there were nearly 150,000 more prescriptions than in 2014, an increase of almost 250%.

Figure 17: Buprenorphine Prescriptions* by Year for AR Residents by AR Prescribers, Arkansas 2014-2023.



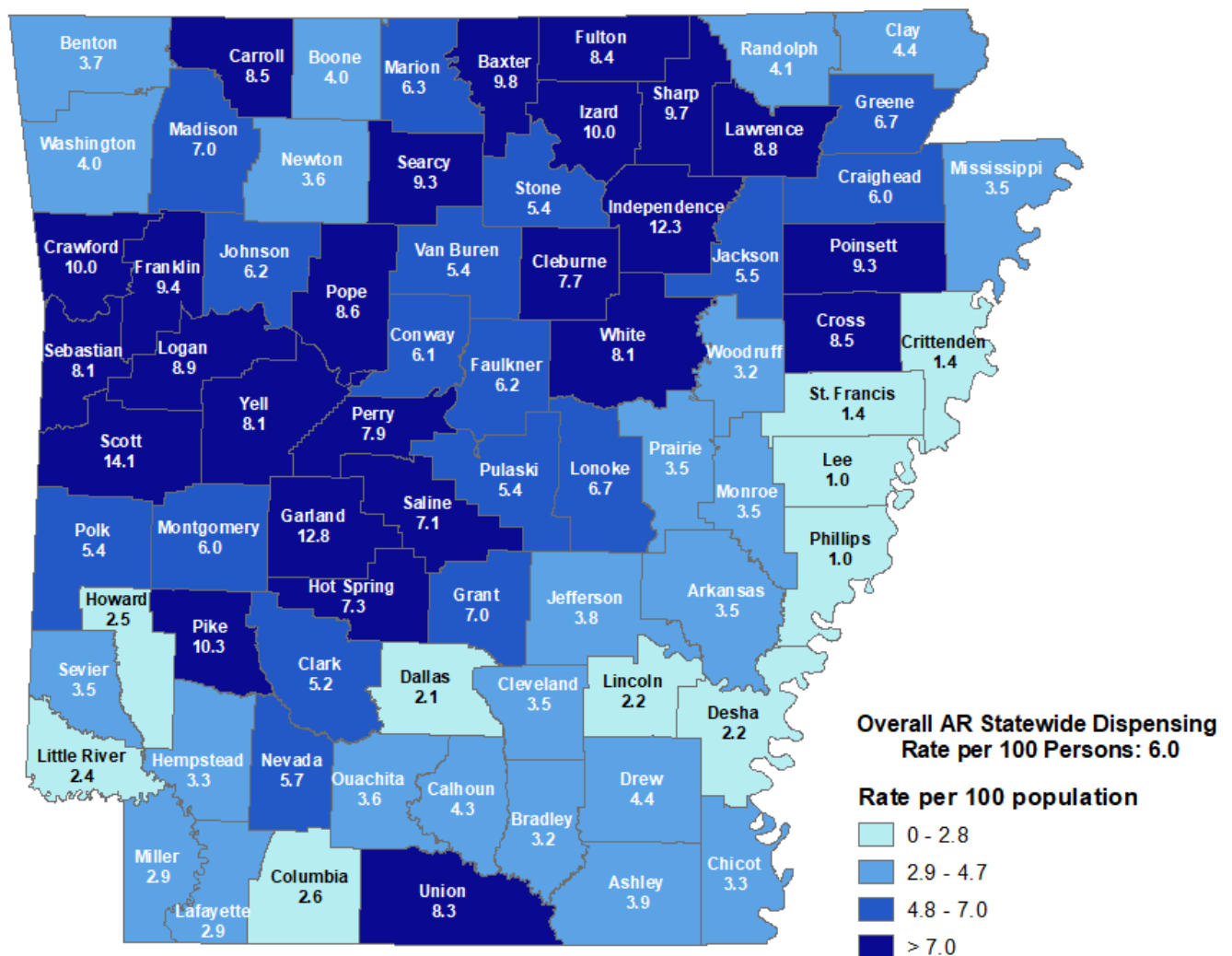
Source: AR PDMP

*Includes all buprenorphine-containing products

Buprenorphine Dispensing County Rates

The buprenorphine dispensing rate describes the number of buprenorphine prescriptions indicated for treatment of OUD dispensed per 100 people. According to the CDC, the overall national buprenorphine dispensing rate was 4.9 in 2022. In 2023, Arkansas had a buprenorphine dispensing rate of 6.0. Individual counties ranged from 0.98 (Phillips County) to 14.1 (Scott County). There are 43 counties in Arkansas that had dispensing rates above the national average of 4.9.

Figure 18: Buprenorphine Dispensing Rates per 100 People per County, Arkansas 2023.



Includes only buprenorphine-containing products approved for treatment of OUD.
Excludes veterinary prescriptions.
Location is based on county of patient address.
Prescriptions written by AR prescribers to AR patients.

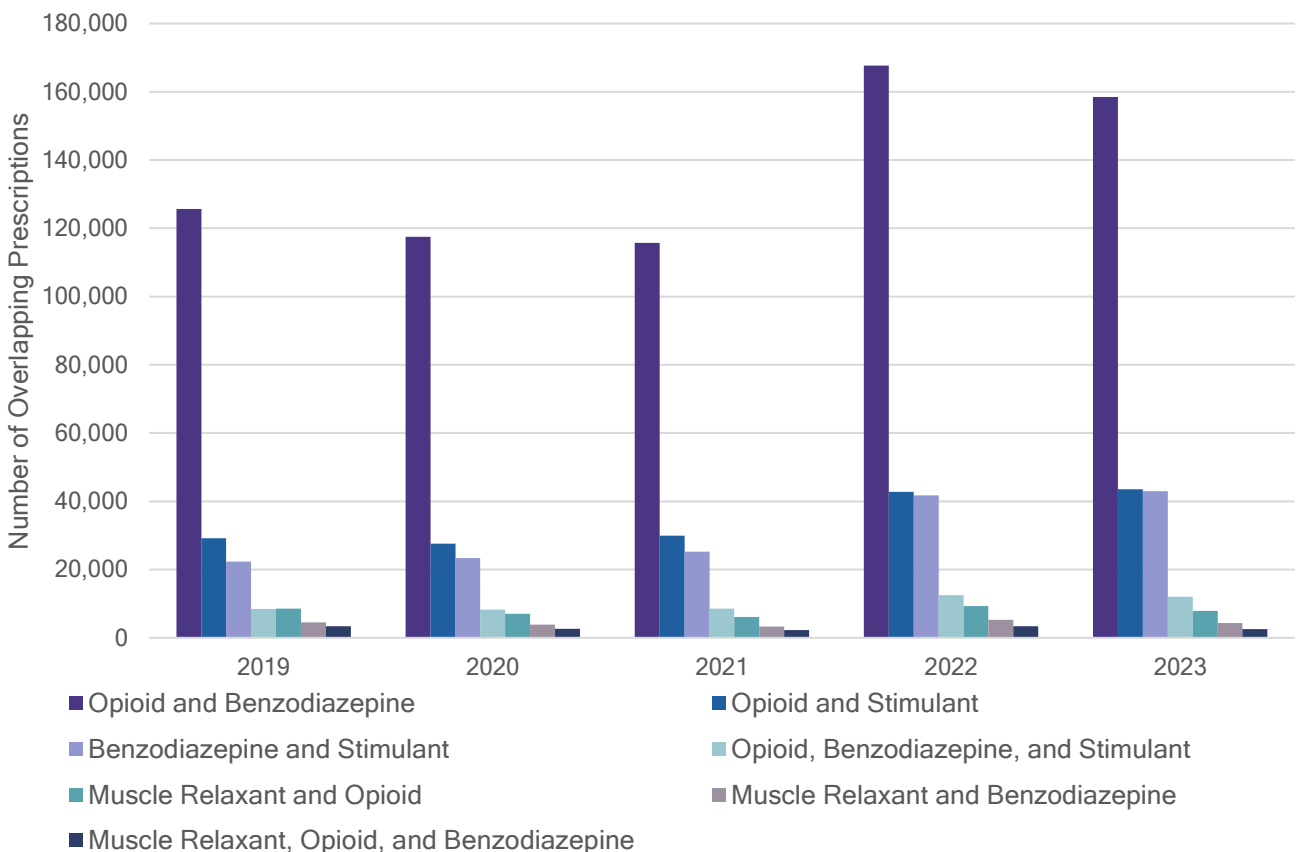
Source: AR PDMP merged with RxNorm

Overlapping Prescriptions

There are numerous potential risks for taking medications from multiple drug classes at the same time, including overdose and death. The largest concern is with the overlapping of opioid and benzodiazepine prescription, but risks are also present when overlapping with stimulants as well. The CDC recommends avoiding concurrent opioid and benzodiazepine prescriptions whenever possible.

Figure 19 shows the overlapping prescriptions of several dangerous combinations of drugs over the past five years. While the numbers of overlapping prescription combinations are low, they have mostly been increasing since 2019. Opioid and benzodiazepine prescriptions remain the most commonly overlapped drug combination. Those overlaps peaked in 2022 with over 160,000 prescriptions, and in 2023 the number was still nearly 40,000 prescriptions higher than 2019-2021.

Figure 19: Overlapping Prescriptions of Multiple Controlled Drug Classes, Arkansas 2019-2023.

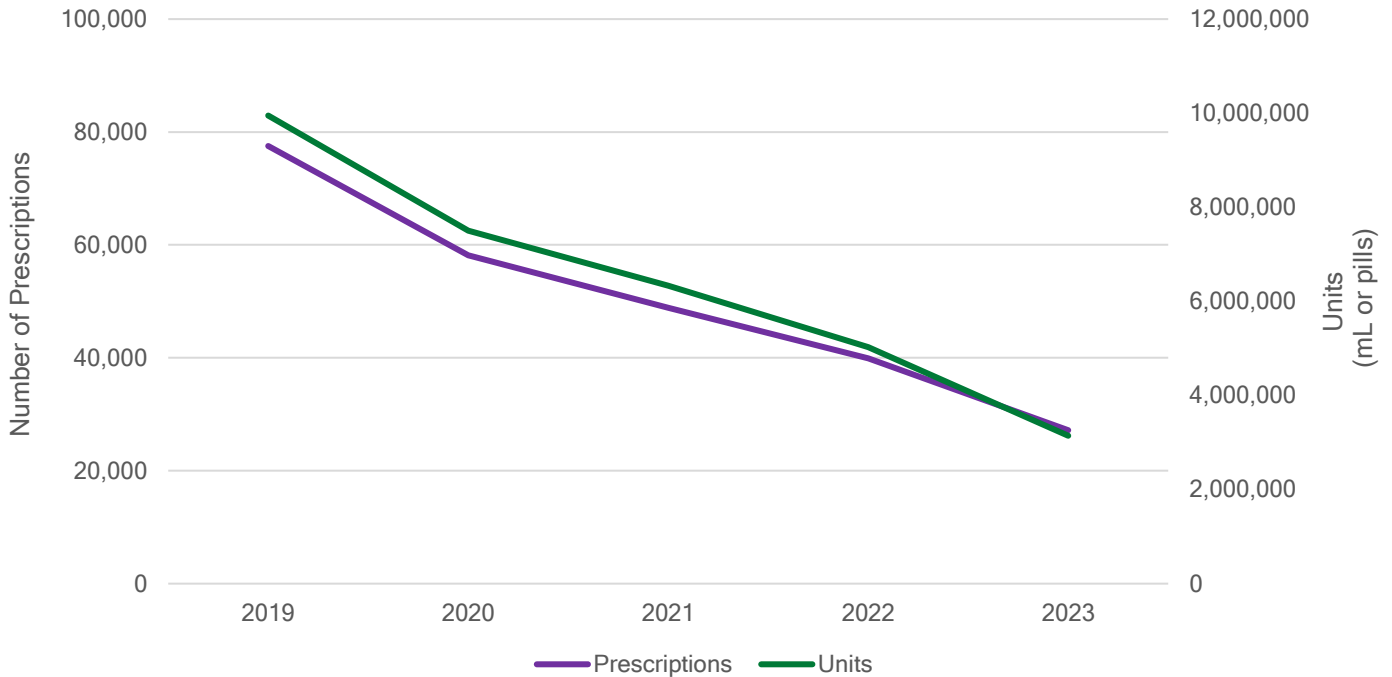


Source: AR PDMP merged with RxNorm Prescriptions written by AR prescribers to AR residents

High Risk Opioid Products

While all opioids have the potential for misuse outside of the prescription guidelines, certain products have historically come with a higher risk for diversion or illegal resale. Products that fall into this category include oxycodone 30mg (Oxycontin), hydromorphone 4 or 8mg (Dilaudid), and promethazine with codeine cough syrup (Phenergan with Codeine). Over the past five years, the overall prescriptions and individual units (pills or milliliters) have drastically decreased for all high-risk opioids.

Figure 20: High Risk Opioid Prescriptions and Units, Arkansas 2019-2023.



Source: AR PDMP merged with RxNorm
 Prescriptions written by AR prescribers to AR residents

Acknowledgements

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