# ALASKA'S PRESCRIPTION DRUG MONITORING PROGRAM

## Analysis of 2021 Awareness & Feedback Questionnaire

January 2022


Prepared by

**NPC Research**
Portland, OR 97214

**Marny Rivera, Ph.D.**
rivera@npcresearch.com
**Sarita Panchang, Ph.D.**
panchang@npresearch.com
**Leanza Walker, M.A.**
walker@npcresearch.com

# CONTENTS

**Executive Summary** ..... **1**
Background ..... 1
Recommendations Based on the 2021 Survey ..... 1
**Introduction** ..... **3**
Sample Used for Analysis ..... 4
Respondents Demographics ..... 5
**Key Findings** ..... **7**
Awareness of Resources ..... 7
Reviewing and Reporting in the PDMP ..... 9
Reviewing Patient History Using the PDMP ..... 9
How PDMP Users Report Prescriptions ..... 10
Denying a Prescription ..... 12
Barriers and Motivations for PDMP Use ..... 15
Impact of Covid on PDMP Usage ..... 19
Role of PDMP Delegates ..... 21
**Conclusions** ..... **23**
**Appendix A: Methods** ..... **26**
**Appendix B: Respondent Background** ..... **27**
**Appendix C: Awareness of PDMP Resources** ..... **29**
**Appendix D: Use of PDMP in Reviewing & Reporting** ..... **33**
**Appendix E: Denying Prescriptions** ..... **37**
**Appendix F: PDMP Challenges and Reasons for Use** ..... **41**
**Appendix G: Impact of COVID-19** ..... **45**
**Appendix H: Utilization of Delegates** ..... **48**

## EXHIBITS


Exhibit 1: Most Respondents were Alaska Residents and Prescribers ..... 4

Exhibit 2: Over half of respondents were MDs/DOs and NPs ..... 5

Exhibit 3: Over 70% have used the PDMP for at least 3 years ..... 6

Exhibit 4: Most PDMP users work in small offices, the IHS, and hospitals ..... 6

Exhibit 5: Respondents were most aware of registration resources ..... 7

Exhibit 6: Prescribers most often denied because of overlapping prescriptions, multiple provider episodes, or a dangerous combination of treatment ..... 12

Exhibit 7: Pharmacists most often denied because the prescription was not in the best interest of the patient, it was not in the usual course of medical treatment, or they did not agree with the prescriber ..... 13

Exhibit 8: Prescribers and pharmacists experience barriers due to using the PDMP ..... 16

Exhibit 9: Prescribers and pharmacists use the PDMP to reduce opioid misuse, preserve professional reputations, and comply with requirements ..... 17

Exhibit 10: On average, PDMP disagreed that their PDMP habits changed due to COVID-19 ..... 19


## APPENDIX TABLES


Table 1. Age by role for all questionnaire respondents ..... 27

Table 2. Length of time using the PDMP by role for all questionnaire respondents ..... 28

Table 3a. Prescriber awareness of various resources related to the PDMP (Q91) ..... 29

Table 3b. Pharmacist awareness of various resources related to the PDMP (Q34) ..... 29

Table 4a. Prescriber rating of how helpful it was to interact with state boards (Q87) ..... 30

Table 4b. Pharmacist rating of how helpful it was to interact with state boards (Q30) ..... 30

Table 5a. Physicians – Do you attend meetings held by your licensing board? (Q88) ..... 31

Table 5b. Pharmacists' attendance of Board of Pharmacy meetings (Q31) ..... 31

Table 6a. Physicians – Are you subscribed to Board listservs? (Q89) ..... 32

Table 6b. Pharmacists – are you subscribed to Board of Pharmacy listserv (Q32) ..... 32

Table 7. Do you prescribe/dispense controlled substances, by role (Q53, 3) ..... 33

Table 8a. Frequency of reviewing patient history in the PDMP when prescribing controlled substances, by prescriber role (Q56) ..... 33

Table 8b. Frequency of reviewing patient history in the PDMP when prescribing controlled substances, pharmacists (Q22) ..... 34

Table 9a. When PDMP patient review is occurring, by prescriber role (Q57) ..... 34
Table 9b. When PDMP patient review is occurring, for pharmacists (Q10) ..... 34
Table 10a. What patients do you generally check in the PDMP, prescribers? (Q62) ..... 35
Table 10b. What patients do you generally check in the PDMP, for pharmacists (Q11) ..... 35
Table 11a. Frequency of reporting prescriptions to the PDMP, for prescribers (Q64) ..... 36
Table 11b. Frequency of reporting prescriptions to the PDMP, for pharmacists (Q21) ..... 36
Table 12a. Prescribers who denied a prescription to a patient (Q58) ..... 37
Table 12b. Pharmacists who denied a prescription to a patient (Q6) ..... 37
Table 13a. Reasons for denying patients a prescription, by prescriber role (Q59) ..... 38
Table 13b. Reasons for denying patients a prescription, for pharmacists (Q7) ..... 38
Table 14a. What information in PDMP was helpful for denial, by prescriber role (Q60) ..... 39
Table 14b. What information in PDMP was helpful for denial, for pharmacists (Q8) ..... 39
Table 15a. Result of prescription denial due to PDMP, by prescriber role (Q61) ..... 40
Table 15b. Result of prescription denial due to PDMP, pharmacists (Q9) ..... 40
Table 16. Experience of barriers, by prescriber role (Q65) ..... 41
Table 17a. Challenges with using the PDMP system and platform, by prescriber role (Q66) ..... 41
Table 17b. Challenges with Using the PDMP System and Platform, for pharmacists (Q13) ..... 42
Table 18a. Reasons prescribers reported using the PDMP, by role (Q67) ..... 43
Table 18b. Reasons pharmacists reported using the PDMP, by role (Q14) ..... 44
Table 19a. COVID-19 has affected PDMP use, by prescriber role (Q92) ..... 45
Table 19b. COVID-19 has affected PDMP use, for pharmacists (Q35) ..... 45
Table 20a. Increase in patient queries in PDMP due to COVID-19, by prescriber role (Q93) ..... 46
Table 20b. Increase in patient queries in PDMP due to COVID-19, for pharmacists (Q36) ..... 46
Table 21a. Decrease in patient reviews due to COVID-19 because they have not seen patients as frequently, by prescriber role (Q94) ..... 47
Table 21b. Decrease in patient reviews due to COVID-19 because they have not seen patients as frequently, for pharmacists (Q37) ..... 47
Table 22a. Awareness of option to use delegates, physicians (79) ..... 48
Table 23a. Do you have authorized delegates on your account, physicians (Q80) ..... 48
Table 24a. Interest in having delegates, physicians (Q81) ..... 49
Table 25a. Reasons for not having delegates, physicians (Q82) ..... 49
Table 26a. Number of delegates, physicians (Q83) ..... 50

Table 27a. Perceived helpfulness of delegates, physicians (Q85) ..... 50
Table 22b. Interest and awareness in having delegates, pharmacists (Q23-24) ..... 51
Table 23b. Interest in having delegates, pharmacists (Q25) ..... 51
Table 24b. Reasons not to have delegates, pharmacists (Q26) ..... 51

# EXECUTIVE SUMMARY

## BACKGROUND

In 2017, legislation was passed in the State of Alaska requiring professionals who prescribe or dispense controlled substances federally classified as schedule II, III, or IV drugs, substances, or chemicals to register with and utilize a Prescription Drug Monitoring Program (PDMP) to track prescription activity. Following increased use of the PDMP, the first PDMP Awareness and Feedback Questionnaire was administered in 2019 to understand behaviors and opinions around the PDMP.

NPC Research has provided feedback on questions, analyzed the PDMP Feedback and Awareness Questionnaire data, and reported on findings since the first administration of the questionnaire in 2019. The original questionnaire has been revised annually with each subsequent administration of the survey to better understand how behaviors and opinions about the PDMP. For example, in 2020 there was an interest in understanding how awareness and use differed by professional prescriber role (i.e., dentists, nurse practitioners, physicians, physician's assistant, podiatrists, optometrists, and veterinarians) and among pharmacists and delegates[1].

The 2021 edition of the survey made further adjustments with additional items on denial of prescriptions, resources on the PDMP, usefulness of the report card and other PDMP enhancements, perceptions of delegates, and the impact of COVID on PDMP usage. Finally, following the 2021 administration, 7 factsheets summarizing role-specific key findings were also created specifically for each of the roles described above[2]. This report contains detailed descriptions of survey results for prescribers and pharmacists (for whom PDMP use is mandatory) particularly where they were asked parallel questions.

## RECOMMENDATIONS BASED ON THE 2021 SURVEY

Results from the 2021 questionnaire indicate several positive findings. First, prescribers and pharmacists **use the PDMP for important reasons around professional or ethical responsibilities to curb opioid misuse**, and not only because its usage is mandatory. Prescribers and pharmacists **are also using PDMP information appropriately to make clinical decisions**; for example, rather than denying prescriptions based on patients looking suspicious, most users harness PDMP patient data on receiving multiple prescriptions, dangerous combination therapies, and other relevant information for prescription denial in certain cases. Surprisingly, **the COVID-19 pandemic largely did not change PDMP usage**, although there was a decrease in PDMP reviews within some prescriber roles.

Results also indicate that **there are gaps in knowledge regarding PDMP resources** and some **disparities across roles regarding PDMP reporting and reviewing practices**. The key recommendations are listed below; the rest of this main report, including an appendix containing all accompanying numeric results, provides additional details.

[1] A delegate is a person who has been authorized to act as a search agent for a supervising PDMP prescriber or pharmacist.
[2] Because of their small numbers, optometrists and podiatrists were included in the Physician factsheet.

- **Continue to update the PDMP user database** to remove users who have moved out of state or have retired.
- **Increase training and marketing of PDMP resources**, possibly through other professional organization listservs and social media sites in addition to state licensing board communications.
- **Encourage checking the PDMP for every patient being prescribed a controlled substance**. While a majority of prescribers and pharmacists do this, efforts should be made to increase the rate of reviews on patients who are prescribed a II or III controlled substance, ideally prior to seeing the patient.
- **Ensure usage of automated reporting of prescriptions**. This feature is already available for all user types, but may not be universally known. Pharmacists and providers should be encouraged to update their clinic software to automatically report prescriptions. For providers who directly dispense controlled substances without writing a prescription, further training on the associated reporting requirements would be valuable.
- **Establish more direct communication channels between prescribers & pharmacists** to better enable pharmacists to discuss a patient's history prior to declining a prescription.
- **Improve the PDMP user interface.** Integrating screenshots and introductory videos into informational and educational content about the PDMP could enhance prescribers' and pharmacists' ability to easily navigate the PDMP and available resources.
- **Continue integration of PDMP information into the EMR system**. This is one of the stated barriers to PDMP use reported by prescribers and pharmacists, even though integration of EMR systems has been ongoing since 2016. PDMP resources should emphasize that clinics/pharmacies can submit requests for EMR integration through the National Association of Boards of Pharmacy (NABP) Gateway System.
- **Consider trainings on use of delegates for specific prescribers and pharmacists** who may have greater need for delegates. Increase information dissemination about the time-saving value of delegates and ensure that PDMP resource trainings are marketed towards delegates as well as primary users.

# INTRODUCTION

In Alaska, providers who prescribe and dispense federally classified schedule II, III, or IV drugs, substances, or chemicals (controlled substances) are required to register with the state's Prescription Drug Monitoring Program (PDMP) to review and report patient prescription information (see House Bill 159 for additional information). To evaluate the functionality and usefulness of this program, registered users were asked to participate in the Awareness and Feedback Questionnaire. This questionnaire was first administered in 2019 and was revised in 2020 and 2021 to further assess user behaviors, knowledge, and barriers to the use of the PDMP system. Additionally, starting with the 2020 questionnaire, items specifically designed for pharmacists and delegates (who are authorized to check the PDMP on a prescriber or pharmacist's behalf) were included to gain an understanding on how these roles complement prescribers in their reviewing and reporting practices.

As of the end of 2020, there were 8,087 registered PDMP users. This number is slightly higher than the number of registered PDMP users in 2018 but is a large increase from 1,785 in 2016 (before the legislation was enacted). PDMP registration counts by profession include 3,267 physicians, 918 pharmacists, 939 nurse practitioners, 540 dentists, 551 physician's assistants, 315 veterinarians, 82 optometrists, and 647 "other" federal roles. However, the number of frequent users of the PDMP may be lower than the totals reflected here based on users retiring, moving, or adapting practices. Presently, it is a challenge to identify the users that are actively versus not actively using the PDMP.

The PDMP Awareness and Feedback Questionnaire requested feedback on different components of the PDMP. The purpose of this report is to describe responses to the 2021 questionnaire and provide recommendations for improving PDMP practices in Alaska. We explored the following three research aims to further explore practices of PDMP users:

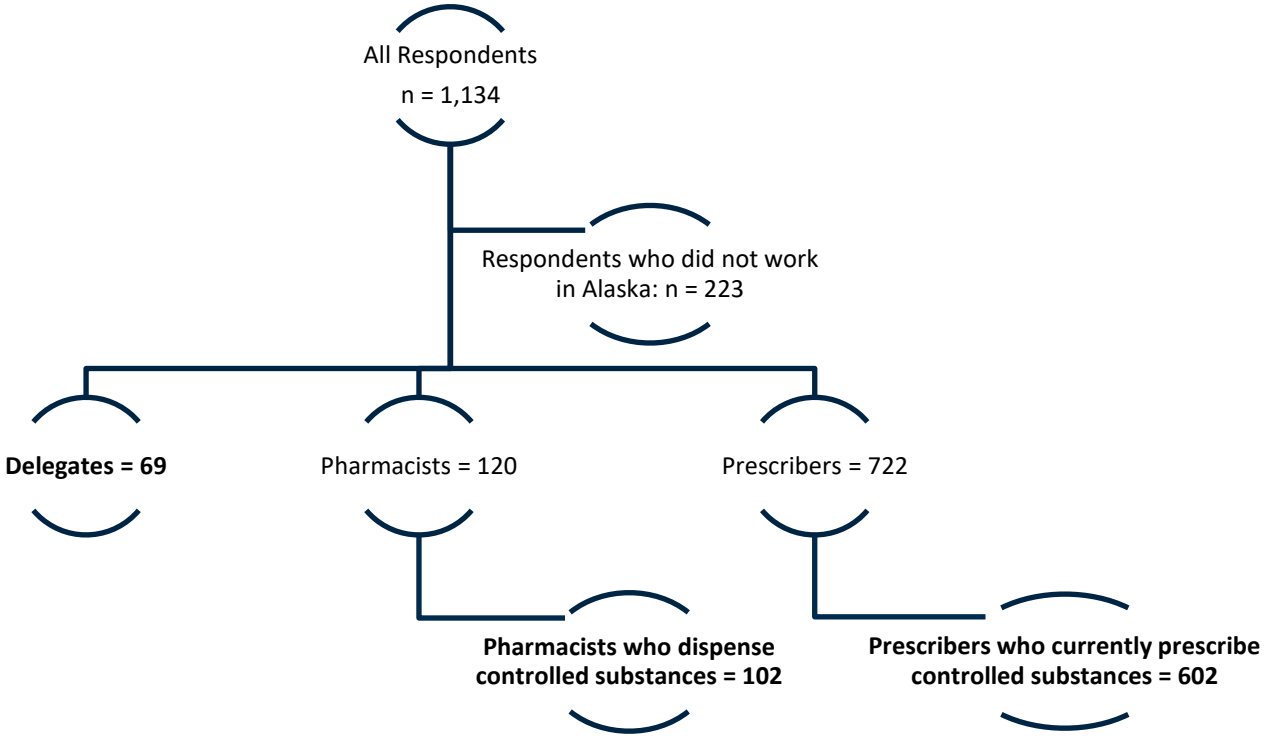
1. *To examine how pharmacists and prescribers with various roles use the PDMP,*
2. *To understand barriers to using the PDMP, and*
3. *To gain knowledge about how delegates utilize the PDMP to support prescriber and pharmacist practices.*

## SAMPLE USED FOR ANALYSIS

The 2021 PDMP questionnaire was sent to all registered PDMP users. Although there were 1,134 respondents who initially started the survey, if they initially answered that they did not live in Alaska or did not prescribe/fill prescriptions for scheduled substances, those respondents were taken to the end of the survey. A total of 773 remaining respondents continued to answer questions based on their stated role, with demographic items at the end. Exhibit 1 below illustrates this, with the bolded sections showing the sample sizes that were ultimately used for analysis.

There were 911 prescribers, 722 of whom worked in Alaska and 602 of whom indicated they prescribed federally scheduled II, III, or IV controlled substances. There were 149 total pharmacists, 120 of whom worked in Alaska, and 102 of whom ultimately dispensed controlled substances. Finally, there were 74 delegates of whom 69 lived in Alaska. As a note, not all respondents in each category answered each question, so the total number of respondents by group was sometimes smaller than these sample sizes. This year's survey consolidated veterinarians into the overall prescriber category, so they are not shown separately here. Specific procedures followed for analysis are available in the Appendix.

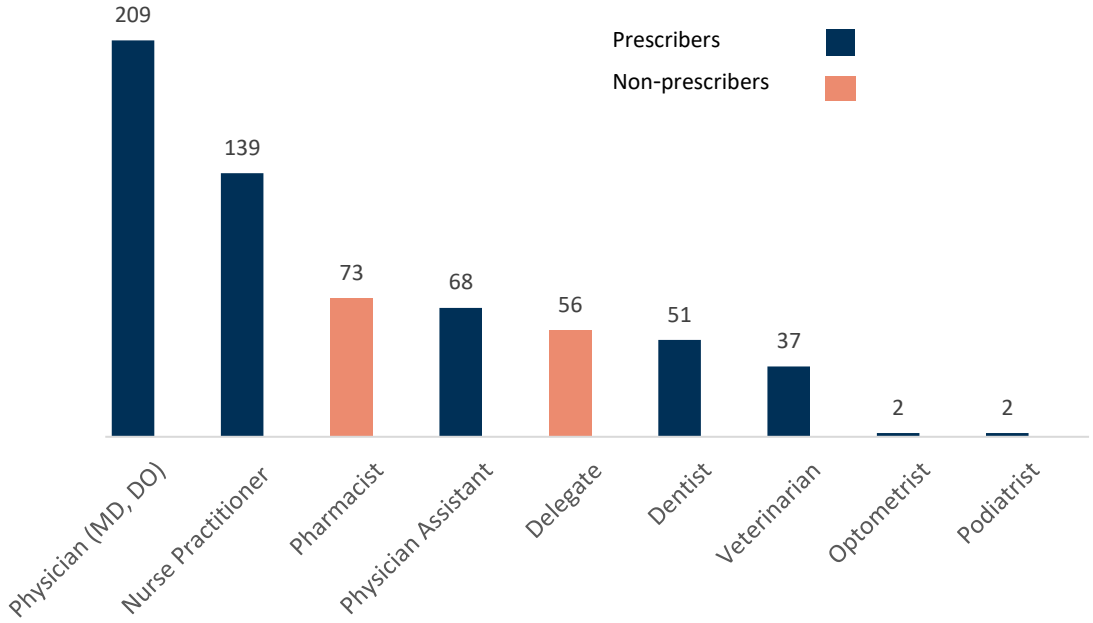
**Exhibit 1: Most Respondents were Alaska Residents and Prescribers**



## RESPONDENTS DEMOGRAPHICS

There were approximately 637 respondents who answered demographic questions, shown in Exhibit 2 below. One third are Doctors of Medicine or of Osteopathic Medicine (MDs and DOs) [3] and 22% are Nurse Practitioners (NP) or equivalent, with the remainder of prescribers being Physician Assistants (PA), dentists, and veterinarians. A fifth of the sample is composed of non-prescribers, including 73 pharmacists and 56 delegates.

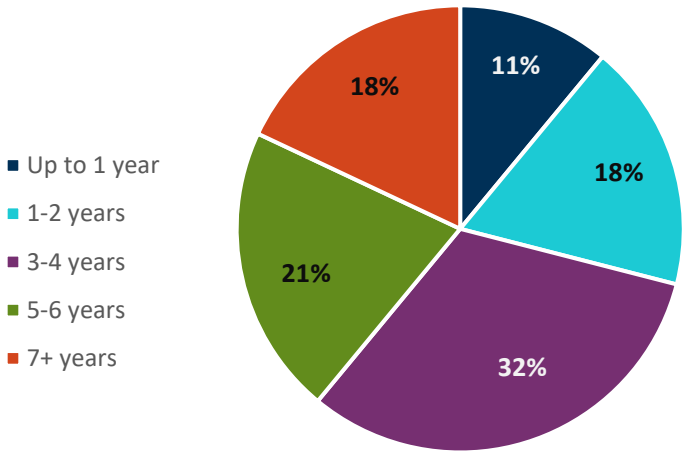
**Exhibit 2: Over half of respondents were MDs/DOs and NPs**




Most respondents are experienced in PDMP usage (Exhibit 3 below), with nearly 40 percent having used the PDMP for at least 5 years. In terms of age (not shown), respondents are relatively advanced professionally. That is, 56% of the sample are age 50 or over, while almost a quarter are between the age of 40 and 49. Eighteen percent are between 30 and 39, while just 2% are under 30.

[3] Although podiatrists and optometrists have their own categories within the Prescriber role, as shown in Exhibit 1 they were present in very small numbers and could be defined as a part of an overall "MD or equivalent" category in the future. Since MDs/DOs are already a diverse group of physicians comprising many specialties who reflect different kinds of PDMP usage, separating optometrists and podiatrists from this category seems unnecessary and reduces statistical power to be able to meaningfully analyze differences across Prescriber roles.

### Exhibit 3: Over 70% have used the PDMP for at least 3 years




Respondents are fairly split by locality – nearly half are in urban areas and 39% are in rural areas, with the remainder working in both. They also work in a variety of professional settings (Exhibit 4, below). Respondents are largely in small private offices, a hospital, or the Indian Health Service. Twenty percent reported working in "Other" settings and were able to enter a free-text response on their specific setting. Within this group, several reported working in veterinary clinics or pharmacies, which could potentially be added in future surveys since they may be common for two key PDMP user roles. Additional "Other" settings included community health clinics, federally qualified health centers (FQHCs), correctional institutions, and urgent care facilities.

### Exhibit 4: Most PDMP users work in small offices, the IHS, and hospitals

| Work Settings | Number | Percent |
|---|---|---|
| Small private office; 5 or fewer practitioners | 193 | 30% |
| Large private office; 6 or more practitioners | 77 | 12% |
| Hospital; inpatient or outpatient | 143 | 22% |
| Indian Health Service | 128 | 20% |
| Emergency Room | 40 | 6% |
| Healthcare facility (nursing home, substance use treatment facility, hospice, etc.) | 26 | 4% |
| Military facility or Veterans Affairs system | 20 | 3% |
| Academic practice | 14 | 2% |
| Other setting | 128 | 20% |

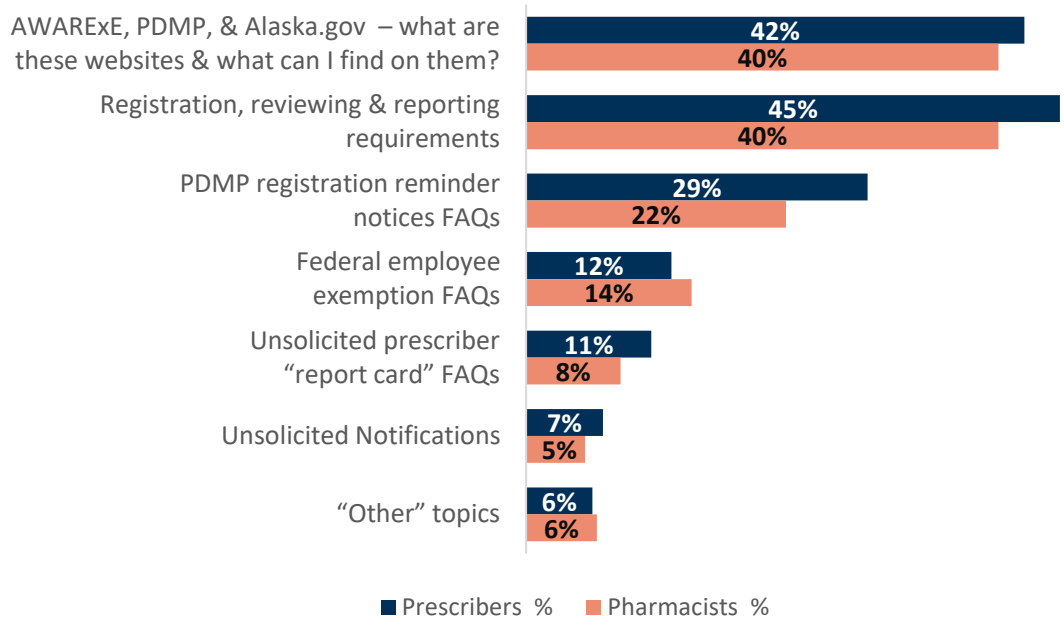
*Note:* Percents add up to more than 100% because respondents could select multiple categories.

# KEY FINDINGS

## AWARENESS OF RESOURCES

Prescribers and pharmacists reported similar levels of awareness of PDMP resources, shown in Exhibit 5. Within prescribers, there were no statistically significant differences by role. A large proportion of prescribers (42%) answered that they were aware of what the *AWARExE, PDMP,* and *Alaska.gov websites* were[4]. 45% knew about *registration, reviewing, and reporting* requirements, while 29% were aware of *PDMP registration reminder notices and FAQs*. Pharmacists followed a similar trend: the largest groups were aware of *AWARExE, PDMP, or Alaska.gov* resources or *registration, reviewing, and reporting* requirements, followed by *PDMP registration reminder notices and FAQs*. Both groups tended to be less aware of the other resources such as *federal employee exemption FAQs, unsolicited prescriber report card FAQs, unsolicited notifications*, and "Other" topics.

**Exhibit 5: Respondents were most aware of registration resources**




*Note:* Percents add to more than 100% because respondents could select multiple types of resources.

[4] This response option is phrased: "AWARExE, PDMP, & Alaska.gov – what are these websites and what can I find on them?" This option is the only one that is phrased this way and choosing it suggests that the respondent is *not* aware of these resources. The phrasing may be confusing for readers and could possibly elicit selections that are the reverse of what is intended. Thus, the results on this item should be interpreted with caution. Future versions of the survey could consider rephrasing to "AWARExE, PDMP, & Alaska.gov," so respondents will choose that option only if they *are* aware of it, consistent with all the other response options. It may also be worth breaking up this item so that each separate website is asked about separately.

There were similar perceptions among prescribers and pharmacists about how helpful their respective state boards were with the PDMP process, with statistically significant differences within prescriber role. Both prescribers and pharmacists (39% and 51%, respectively) said that their interactions with the state boards were extremely, very, or somewhat helpful, suggesting that reaching out to the board may be a useful way to learn more about the PDMP. However, 43% of prescribers and 37% of pharmacists stated that they had not actually attempted to contact state boards about the PDMP. In addition, over half of prescribers never attend meetings held by licensing boards, and 63% of pharmacists never attend; 24% of prescribers and 63% of pharmacists are subscribed to their board listservs. Thus, if utilizing state boards to disseminate information about the PDMP, email or listserv communication may be more effective than meetings, especially for pharmacists. It may also be useful to consider other methods to disseminate resources on the PDMP besides licensing boards, such as meetings or social media accounts associated with affiliated professional organizations.

## SUMMARY

- Prescribers and pharmacists were most often aware of the AWARExE, PDMP, and Alaska.gov websites, followed by registration, reviewing, and reporting requirements, as well as registration reminder notices and FAQs.
- PDMP users were less aware of federal employee exemption FAQs, unsolicited prescriber report card FAQs, unsolicited notifications, and the “Other” topics.
- A sizeable proportion of PDMP users (39% of prescribers and 51% of pharmacists) found their interactions with state boards regarding the PDMP to be helpful. However, a majority of prescribers and pharmacists never attend board meetings. Other avenues through which to disseminate PDMP information in addition to board communications may be useful.

# REVIEWING AND REPORTING IN THE PDMP

## Reviewing Patient History Using the PDMP

PDMP users or their delegates generally checked the PDMP frequently when prescribing or filling a prescription, with prescribers having statistically significant differences by roles. Across all prescribers, an average of 63% review a patient's history in the PDMP *every time they prescribed a controlled substance*. NPs and PAs reported this more frequently than the average prescriber (77% and 68%, respectively), whereas veterinarians and dentists were less likely to report this (42% and 41%, respectively). Among pharmacists, 65% review patient history in the PDMP *every time they filled a prescription for a controlled substance*, which is a positive finding since checking the PDMP is not required by law before filling a prescription. However, 12% of all prescribers and 17% of pharmacists reported never checking the PDMP.

PDMP users also may check the PDMP based on certain characteristics of the patient. Consistent with the above finding, 66% of prescribers and 59% pharmacists said they checked *every patient being prescribed a controlled substance*. There were statistically significant differences here by prescriber role that mirrored the above results, whereby NPs and PAs were more likely to check the PDMP for all controlled substance prescriptions. Prescribers also checked patients who *requested a specific controlled substance* (30%) and patients *with known substance misuse* (23%). Only 11% of prescribers checked patients with *known behavioral issues,* and 7% checked patients *who looked suspicious*. These reports varied statistically by role, with dentists checking patients at higher rates than these averages. That is, 37% of dentists checked patients who requested a specific controlled substance, 30% checked patients with known substance misuse, 18% checked patients who look suspicious, and 23% checked those with behavioral issues. Notably, over half of veterinarians selected "Other" reasons and in free-text follow-up responses, many specified that they felt the question did not apply to them since their patients were animals, or that they checked the owners of the pets.

Among pharmacists, as stated, most checked *every patient who was prescribed controlled substances*. The next most common patients who were checked largely paralleled those checked by prescribers: patients with known substance misuse (17%), patients with a prescription by a specific provider (16%)[5], those with known behavioral issues (11%), and other factors (16%).

Prescribers and pharmacists tended to have different habits on at which point within the patient's visit they reviewed the PDMP for patient prescriptions. For prescribers, 46% reviewed the PDMP *prior to seeing the patient* while 35% reviewed *while the patient was in the room*. There were also statistically significant differences within prescribers, whereby the roles most likely to check the PDMP prior to seeing patients were NPs (62%), PAs (49%), and physicians (48%). Although 7% of overall prescribers said they *never reviewed the PDMP because they assumed the pharmacist would do so before dispensing*, this proportion was higher for veterinarians (38%) and dentists (12%). Among pharmacists, 86% reviewed the PDMP *when the patient dropped off the prescription drug order*, as

[5] Since pharmacists fill prescriptions and prescribers are providers who assign the prescription, this option was only given for pharmacists.

opposed to after the patient left, or when they came to pick up the prescription. Although pharmacists are not required by law to review the PDMP, only 5% said they never did so.

## How PDMP Users Report Prescriptions

Although PDMP users do report their prescriptions to the PDMP, there is considerable variation in reporting habits between prescribers and pharmacists. In some cases, prescribers may directly hand-dispense medication to the patient without writing a prescription to be filled at a pharmacy. Those who directly dispense a greater than 3-day supply of federally scheduled II-IV controlled substances are required to report those to the PDMP. Thus, this question was analyzed only for prescribers who responded that they do sometimes directly dispense more than 3 days' worth of these types of prescriptions. Among the 159 prescribers who directly dispense more than a 3-day supply, more than half (52%) said they *never reported prescriptions to the PDMP because they assume the pharmacist would report after dispensing*. Approximately one quarter of these prescribers report to the PDMP *only when they directly dispense a controlled substance*. Fifteen percent report *during the patient's appointment* – either while the patient is present or as soon as they leave. A small proportion indicated they report to the PDMP *at some point during that day*, or on *regular intervals* such as weekly or monthly. Statistical differences across roles were not assessed due to small sample sizes in each sub-category.

Among pharmacists, the context of reporting prescriptions is somewhat distinct since their role differs from prescribers. Close to half (47%) of pharmacists said that they *reported to the PDMP daily*, and 45% said their *software does this automatically* on a daily basis.[6] Fewer than 3% selected either weekly, monthly, never, or that they report only when directly dispensing a controlled substance. Overall, pharmacists appear to regularly report to the PDMP more frequently than prescribers.

### SUMMARY

- A majority of PDMP users review patient history in the PDMP every time they prescribe or dispense a prescription for a controlled substance. However, among prescribers, dentists and veterinarians are less likely than other professionals to do this.
- Prescribers and pharmacists may also check the PDMP for specific types of patients. Again, the majority check every patient who is being prescribed a controlled substance. After this, prescribers most often check patients who request a specific controlled substance or with known substance misuse, while pharmacists most often check patients with known substance misuse or with a prescription by a specific provider.

[6] As a note, these separate response options encompass two interrelated types of "daily" reporting – pharmacists reporting daily (presumably on their own), or software reporting daily automatically. Since there is only one option that refers to software, if pharmacists utilize any software that reports less often than a daily basis, it may not be clear which option they should choose. This ambiguity is also present for the prior questions about prescribers who report. Future iterations of these questions could consider clearly distinguishing *frequency* of reporting from *automated* reporting to enhance the interpretation of the results.

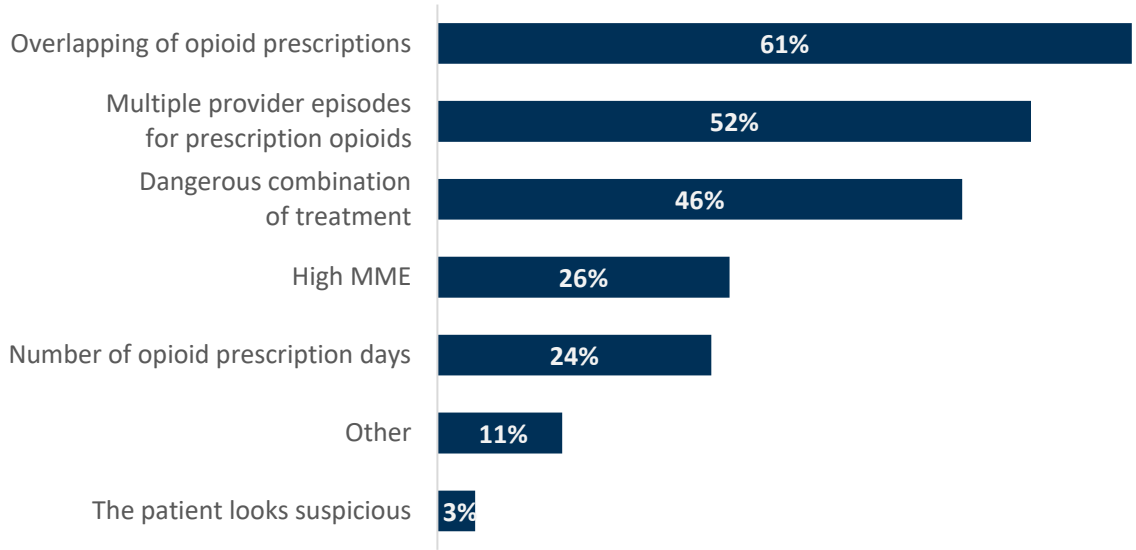
- Prescribers generally review the PDMP prior to seeing the patient or while the patient is still in the room. Dentists and veterinarians are slightly more likely to report that they never review because they assume that the pharmacist will do so. Most pharmacists review the PDMP when the patient drops off the prescription.
- Fewer than a third of all prescribers directly dispense more than a 3-day supply of federally scheduled II-IV controlled substances. Among those who do, more than half never report prescriptions to the PDMP because they assume the pharmacist would report after dispensing. However, there appears to be confusion among some prescribers about what constitutes 'directly dispensing' and what the associated reporting requirements are, which may affect responses seen.
- In contrast, close to half of all pharmacists reported prescriptions to the PDMP daily, and just under half said their software reported to PDMP automatically on a daily basis. Fewer than 3% said that they never reported prescription to PDMP.

## DENYING A PRESCRIPTION

PDMP users occasionally deny prescriptions to patients in certain situations. This year's survey included new items on information that was helpful in making the decision to deny, and the actions taken once the prescription was denied. There were statistically significant differences between prescribers across many of these items. A majority of all NPs, physicians, and PAs had denied a prescription in the past (63%, 59%, and 79% respectively). In contrast, a majority of dentists, optometrists, podiatrists, and 98% of veterinarians, had *not* denied a prescription. The 57% of all prescribers who reported denying a prescription provided further information about their decision.

Among these prescribers, reasons for denial had to do with multiple prescriptions, prescription days, or multiple provider episodes (Exhibit 6). Specifically, *overlapping opioid prescriptions* was the most common reason for denying a prescription, chosen by 61% of prescribers who denied. There were also statistically significant differences by prescriber role for this reason; physicians chose it at a higher rate of 73% while PAs chose it the least often, at 46%. Fifty-two percent of prescribers selected *multiple provider episodes* (five or more prescriptions filled at 5 or more pharmacies over a 3-month period) as the reason for denial. Another reason for denying was that it was a *dangerous combination of treatments;* this reason was statistically significant by role, selected by 46% of prescribers overall but only 11% of dentists. Twenty-four percent of prescribers selected *number of opioid prescription days* as a reason. Lastly, slightly more than a quarter chose *high morphine milligram Equivalents (MME)* as a reason for denying a prescription. The least common options chosen by prescribers were that the *patient looked suspicious* (3%) and other reasons (11%).

### Exhibit 6: Prescribers most often denied because of overlapping prescriptions, multiple provider episodes, or a dangerous combination of treatment

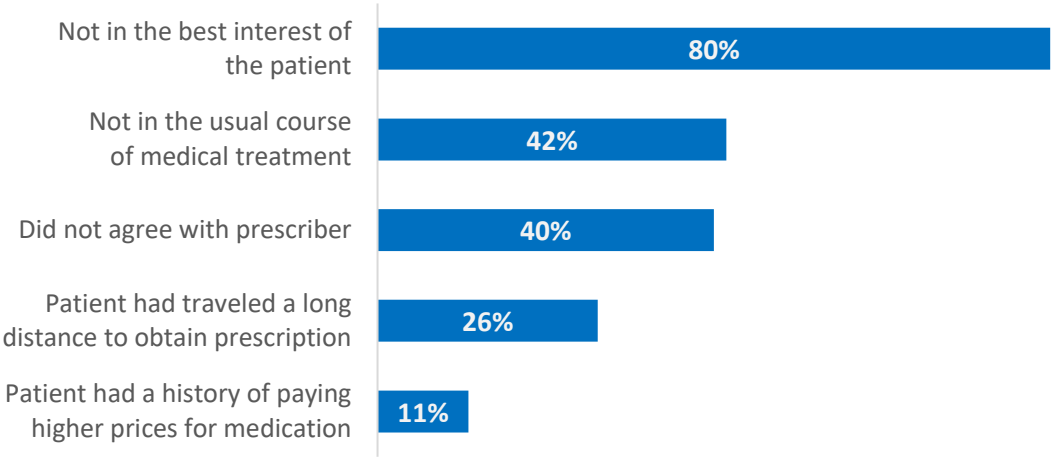



*Note:* Item includes only those who responded that they have denied a prescription. Percents add up to more than 100% because respondents could select multiple options.

Information from the PDMP that prescribers used to deny prescriptions was largely consistent with the above responses; that is, the most commonly chosen types of information pertained to multiple prescriptions or provider episodes. Eighty-two percent used information that the patient had received *too many prescriptions* from the same or multiple providers, and these rates were similar across roles. Forty-four percent used information from the PDMP on *dangerous combination therapies* to deny a prescription. This option had statistically significant differences; PAs chose it more often at 54%, whereas dentists chose it the least often at 15%. Seventeen percent of prescribers selected *high NarxScore*, a clinical index reflecting patterns of use of specific prescription substances, with higher scores indicating a patient's increased risk of an adverse health outcome, such as an overdose. Finally, 9% felt that "Other" information in the PDMP helped them decide to deny the prescription.

As a result of the decision to deny, prescribers most often *discussed their concerns* with the patient (81%). There were statistical differences by role in taking this course of action; dentists did this the least often at 63%, while NPs chose it more often at 90%. Another course of action was to *use the resources in the PDMP* to guide their conversation with the patient. There were statistical differences here as well: 53% of prescribers overall chose this action, whereas dentists chose it the least often at 26%. Only 13% of prescribers "*just said no*," with statistical differences by role – PAs chose this option at a higher rate of 22%. Twelve percent opted to *refer the patient to another provider*, while 5% chose "Other" actions; results were not statistically different by role for these options.

**Exhibit 7: Pharmacists most often denied because the prescription was not in the best interest of the patient, it was not in the usual course of medical treatment, or they did not agree with the prescriber**




*Note:* Item includes only those who responded that they have denied a prescription. Percents add up to more than 100% because respondents could select multiple reasons for denying a prescription.

Among pharmacists, the majority—70%—had denied filling a prescription at some point. These pharmacists then answered corresponding items on the reasons for denial (Exhibit 7), information in

the PDMP that was used, and the results of the denial. Among those who denied filling a prescription, 80% said it was *not in the best interest* of the patient, 42% said that it was *not in the usual course of medical treatment*, and 40% *did not agree with the prescriber*. Slightly less common reasons for denial were that the patient had *traveled a long distance* to obtain the prescription, or that they had a *history of paying higher prices* for medications.

Similar to prescribers, when reporting information on the PDMP that helped determine the decision to deny prescription, 88% of pharmacists selected PDMP information indicating that the patient had received *too many prescriptions* from the same or multiple providers, 51% chose the reason that the patient was on *dangerous combination therapies*, and 26% indicated *NarxScore*. The courses of action taken as a result of denial were also somewhat similar to those of prescribers. Seventy-seven percent of pharmacists reported that they *discussed their concerns* with the patient while half of pharmacists *used the resources in the PDMP* to guide their conversation. Fifty-nine percent *referred the patient back to the provider*. Among the smaller percentage of pharmacists who selected "Other," nearly all reported contacting the patient's provider themselves. This option could potentially be added to future iterations of the survey.

## SUMMARY

- 57% of prescribers and 70% of pharmacists reported ever denying a prescription to a patient. These PDMP users were asked subsequent questions on reasons for denial, information in the PDMP that helped determine prescription denial, and the course of action taken as a result.
- Among prescribers, the most common reason for denial was overlapping opioid prescriptions, followed by multiple provider episodes, dangerous combination of treatments, or number of opioid prescription days. Information in the PDMP that helped deny largely pertained to receiving too many prescriptions from the same or multiple providers and dangerous combination of therapies.
- Among pharmacists, the most common reasons for denial were that the prescription was not in the best interest of the patient, not in the usual course of medical treatment, or that they did not agree with the provider. Information in the PDMP that helped make this determination included information showing that the patient received too many prescriptions from the same or multiple providers, dangerous combination therapies, and NarxScore.
- As a result of the decision to deny, prescribers and pharmacists most often discussed their concerns with the patient or used the resources in the PDMP to guide their conversation. Over half of pharmacists also referred the patient back to their provider, and a handful reported contacting the provider themselves.

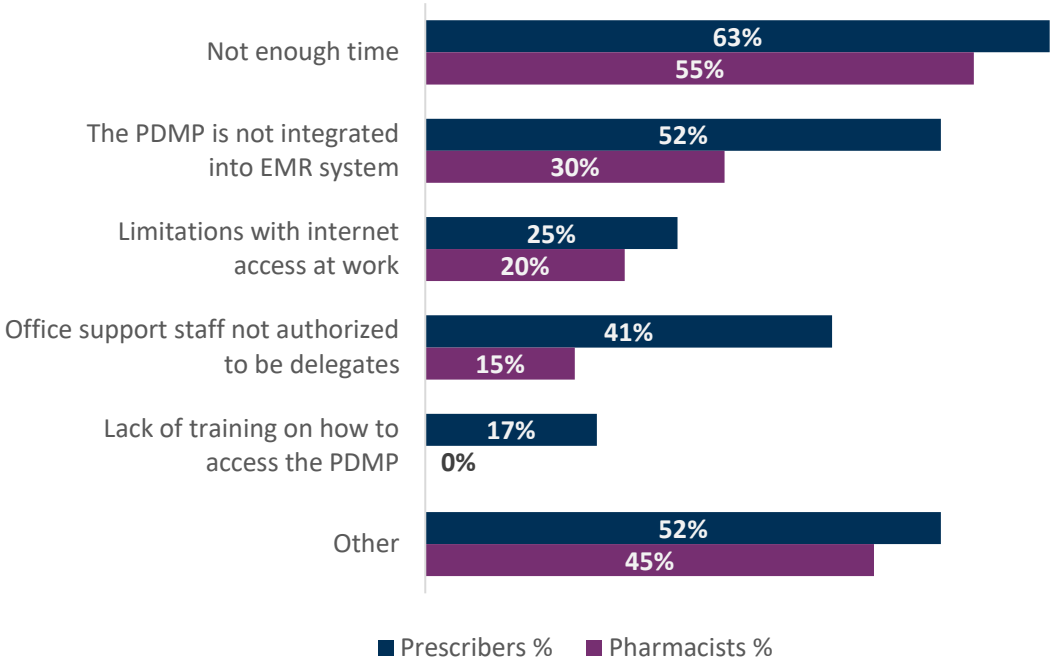
# BARRIERS AND MOTIVATIONS FOR PDMP USE

## Barriers and Challenges

Although many users are familiar with using the PDMP, challenges are still described for some (Exhibit 8). Among prescribers, there was a statistically significant difference by role in reporting barriers to using the PDMP. Although a minority of prescribers (31%) reported barriers, this proportion was much higher for veterinarians at 90%, and somewhat lower for NPs and PAs at 22% and 23%. The most common barrier was *not enough time*, selected by 63% of those prescribers who reported barriers. Another was that the *PDMP is not integrated into the electronic medical records (EMR) system*, followed by the barrier that *office support staff were not authorized to be delegates*. A quarter had *issues with Internet access at work*. 17% said there was a *lack of training on how to access the PDMP*, with significant differences by role; in particular, a higher percentage of veterinarians reported this barrier (38%) whereas 7% of physicians did. Finally, 52% chose 'Other' barriers, which was also significantly different by role: at 78%, veterinarians reported this barrier more often than other prescribers. Among prescribers who selected 'Other' and were able to enter a free-text response, frequent password changes were mentioned by several users.

Pharmacists reported the existence of barriers to PDMP usage at a similar rate as prescribers, and experienced similar types of barriers. Although 75% of pharmacists said they had no barriers to PDMP use, 25% did describe challenges in using the system. Among the pharmacists who did have barriers, *not enough time* was a common one, indicated by 55%. The next most common barrier was *a lack of PDMP integration into their EMR system*, followed by *Internet access limitations at work*. Fifteen percent cited having *not having office support staff who were authorized to be delegates*, while 45% selected 'Other' barriers. Of the 9 pharmacist respondents who chose 'Other' problems, website issues or frequent password change requirements that resulted in being locked out of accounts were the most common challenges.

### Exhibit 8: Prescribers and pharmacists experience barriers due to using the PDMP

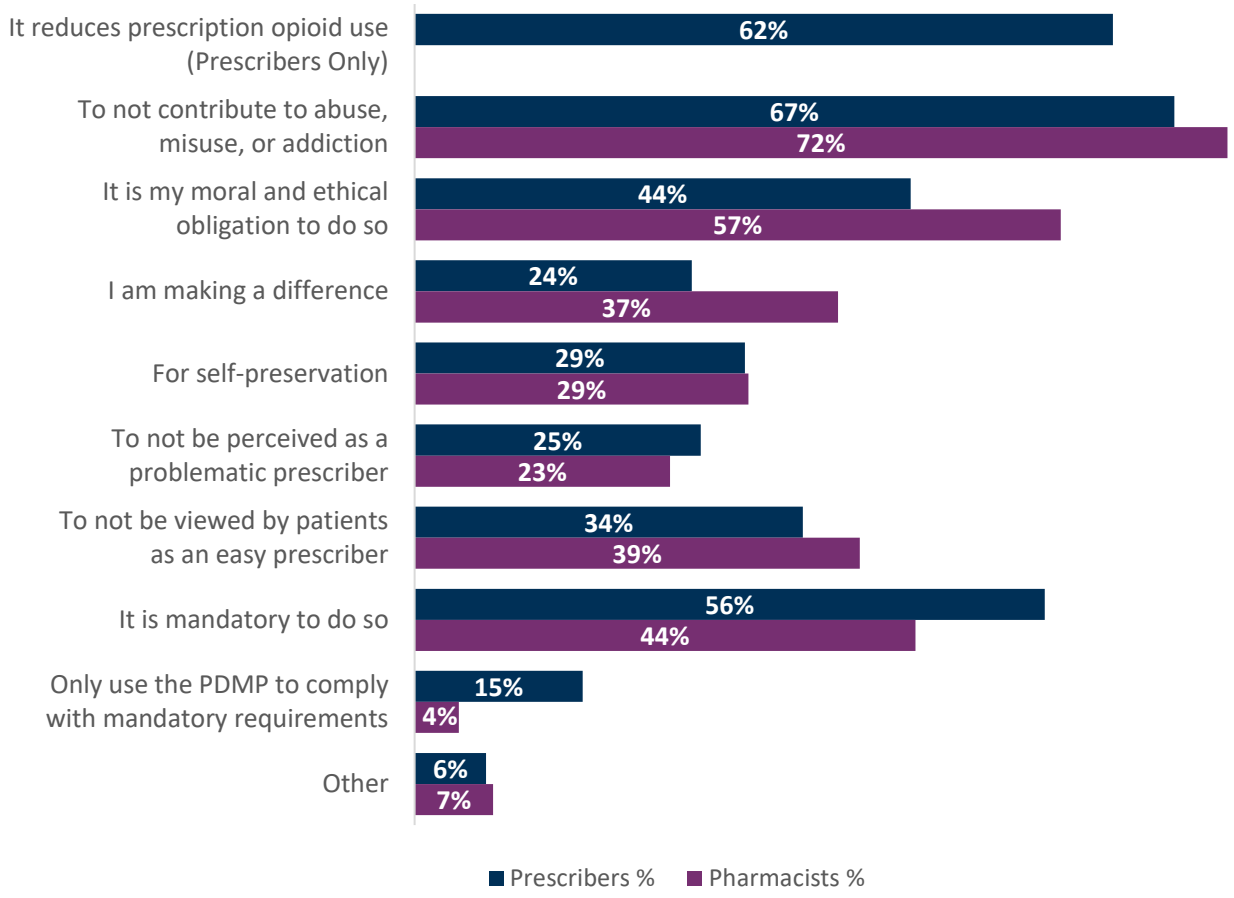



## Why Users Use the PDMP

Despite the barriers faced by 25 to 31% of pharmacists and prescribers, PDMP users had many important reasons why they used the PDMP (Exhibit 9). Among prescribers, the most common reasons to use the PDMP generally pertained to a professional responsibility to limit substance abuse: specifically, that they *did not want to contribute to abuse, misuse, or addiction*; that it *reduces prescription opioid misuse*; that it was their *moral and ethical obligation*; and they were *making a difference*. The mandatory use of the PDMP was also a reason for using the PDMP: 56% indicated that it was *mandatory*, while 15% of prescribers said they used the PDMP *to comply with mandatory requirements.*[7] Finally, the role of reputation among colleagues and patients was an additional reason to use the PDMP: they *did not want to be seen by patients as an easy provider* to obtain prescriptions; they did not want to be *perceived as a problematic prescriber by peers*; and they were concerned about *self-preservation*. There were statistically significant differences by prescriber role in reasons for using the PDMP; in particular, NPs and PAs chose several of the available reasons at higher rates than physicians, suggesting that professional rank may play a role in the sense of obligation or risk with regards to using the PDMP. On the other hand, veterinarians were less likely to select any of these reasons for using the PDMP, which is consistent with many free-text responses of veterinarians indicating that they felt the structure of the PDMP did not apply to or provide clear guidance for their role in caring for animals.

[7] Since these options effectively refer to the same thing, future versions of the survey might use only one of the two options to avoid redundancy.

## Exhibit 9: Prescribers and pharmacists use the PDMP to reduce opioid misuse, preserve professional reputations, and comply with requirements




Pharmacists had relatively similar reasoning as prescribers for using the PDMP. Regarding avoiding substance abuse, 72% of pharmacists said they *did not want to contribute to abuse, misuse, or addiction*, followed by viewing it as a *moral and ethical obligation* to use the PDMP, or that they were *making a difference* by using the PDMP. Just under half of pharmacists stated they only used the PDMP because of *mandatory requirements*. Finally, regarding professional reputation, a sizeable percentage of pharmacists said they did not want to be *viewed by patients as an easy provider*, they did not want to be *perceived by peers as a problematic prescriber*, or that they used the PDMP for *self-preservation*.

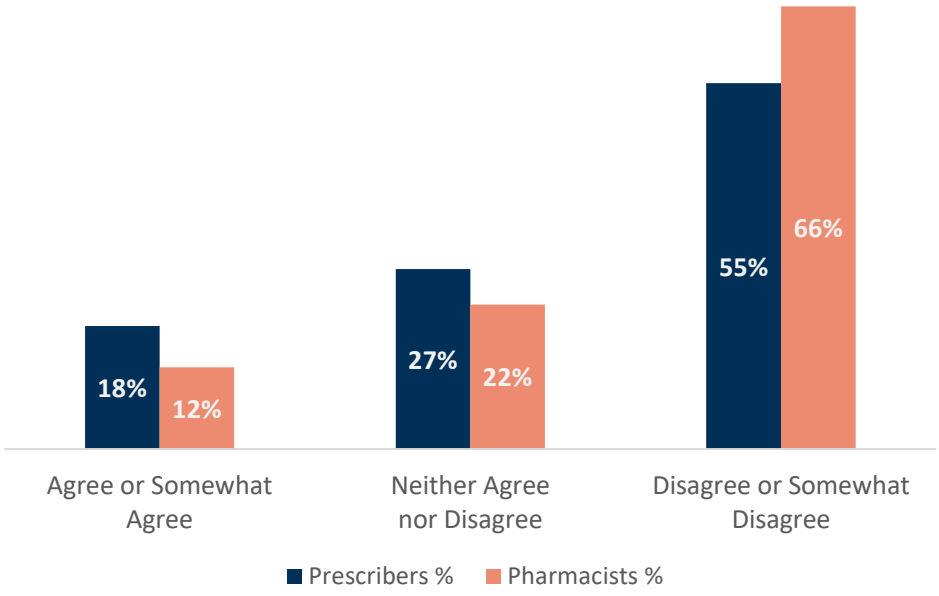
## SUMMARY

- Fewer than a third of prescribers reported any barriers to using the PDMP. For those who did report barriers, the most common ones were not having enough time, the lack of PDMP integration into the EMR system, office support staff were not authorized to be delegates, and issues with internet access at work.
- One quarter of pharmacists reported any barriers to using the PDMP. For those who did report barriers, the most common ones were not having enough time, a lack of PDMP integration into the EMR system, and internet access limitations at work.
- Among prescribers and pharmacists who had "Other" challenges, frequent password change requirements resulting in access issues were common problems.
- Despite these challenges, PDMP users also used the PDMP for several important reasons, encompassing themes of responsible opioid prescription practices, professional reputation, and requirements to use the PDMP. Specifically, the most common reasons cited by both prescribers and pharmacists for using the PDMP was to reduce prescription opioid use/not contribute to abuse, misuse, or addiction; that it was their moral and ethical obligation to do so; and that it was mandatory to use the PDMP. Concerns about self-preservation or to avoid being seen by patients or peers as an easy prescriber were also common.

## IMPACT OF COVID ON PDMP USAGE

The ongoing COVID-19 pandemic has had huge impacts on the healthcare industry; thus, new items were added to the PDMP survey this year to gauge potential changes in PDMP usage during the pandemic (Exhibit 10). Surprisingly, only 18% of prescribers agreed or somewhat agreed that their *PDMP use was affected by COVID-19*. Slightly more than half the sample disagreed with this statement, while 27% were unsure (choosing the "neither agree nor disagree" option). There were no statistically significant differences by role in these responses. Results for pharmacists suggest that their PDMP habits were even less affected: 12% of pharmacists agreed or somewhat agreed that COVID-19 had an impact on PDMP use, while 66% disagreed or somewhat disagreed.

**Exhibit 10: On average, users disagreed that their PDMP habits changed due to COVID-19**




PDMP users were then asked about whether their PDMP queries may have increased or decreased during the pandemic. Among prescribers, only 5% agreed or somewhat agreed that *patient queries in the PDMP increased* during COVID, while 26% were neutral. There were no statistically significant differences by role in these responses. Among pharmacists, 7% agreed or somewhat agreed that PDMP queries increased during COVID-19, while 31% were neutral.

The final item in this suite of questions asked whether there was a *decrease in PDMP reviews* during the pandemic.[8] Approximately 1 in 4 prescribers (27%) agreed or somewhat agreed that their

[8] This question was followed by a final one, "I have reviewed fewer patients for other reasons." The question is likely confusing for respondents, especially because there is no analogous question about whether *more* patient reviews in the PDMP have occurred "for other reasons." This question could be cut in the future, so that the COVID-specific questions ask only whether PDMP reviews during the pandemic have remained the same, increased, or decreased, along with a free-text response to provide more information if desired.

patient reviews in the PDMP had declined during COVID. Here there were statistically significant differences by role, whereby more dentists (44%) and more PA's (35%) stated that their patient reviews had declined during COVID. Veterinarians were less likely to see a decrease in PDMP reviews during the pandemic, as only 16% agreed with this statement. Among pharmacists, on the other hand, only 11% agreed that they were reviewing fewer patients in the PDMP during COVID, while 63% disagreed or somewhat disagreed.

These findings, along with corresponding free-text responses, leave room for tentative conclusions about the impact of COVID on PDMP habits by profession. Overall, both prescribers and pharmacists generally felt that their PDMP use did not change during the pandemic, but in some cases prescribers did report a decrease in PDMP queries. Prescriber role likely matters here: as mentioned above, dentists were more likely than others to say that their PDMP reviews decreased during COVID-19. It is likely that dental patients may have avoided their visits during the pandemic, corresponding to a decline in patient reviews. On the other hand, veterinarians were more likely than average to *disagree* that their PDMP reviews decreased. While human patients may have made the decision to forgo nonserious clinical visits for themselves during the pandemic, animals presumably needed the same level of healthcare as before COVID and pet owners may be unwilling to forgo care for their pets. Since veterinarians treat animals, they may not have experienced as much of an impact from COVID. Other prescriber roles, such as physicians, PAs, and NPs, may have seen variations in their patient reviews depending on their level of specialization. In contrast, few pharmacists felt that their PDMP queries increased or decreased.

## SUMMARY

- Most prescribers and pharmacists did not report that their PDMP habits were impacted by COVID-19.
- Only 5% of prescribers and 7% of pharmacists agreed or somewhat agreed that PDMP queries *increased* during the pandemic.
- Few pharmacists (11%) reported that patient reviews in the PDMP had *declined* during COVID. However, 27% of prescribers agreed or somewhat agreed that patient reviews in the PDMP had declined during COVID, with differing levels of agreement based on prescriber role. Possibly, some prescriber specialties were seeing fewer patients or writing fewer types of specific prescriptions during the pandemic whereas others, such as veterinarians, may have not seen a change in their patterns since they treat nonhuman patients who continued to receive care.

## ROLE OF PDMP DELEGATES

While PDMP users have the option of authorizing delegates to access the PDMP on their behalf, delegates are not largely being utilized overall. Among prescribers, most (61%) were aware of their option to use delegates. There were statistically significant differences by role, with PA's and veterinarians having a higher level of awareness (70% and 72% respectively). Despite the majority of prescribers being aware of their option to use delegates, only 17% actually had any authorized delegates on their account; 83% did not. There were also statistically significant differences by role here: dentists were less likely than average to have delegates (4%), whereas physicians were more likely to have them (23%).

Among the 441 prescribers who did not have delegates, only 21% were interested in having any. There were statistically significant differences by role, with a larger percentage of dentists indicating an interest in having delegates (37%). The reasoning for not having delegates varied—58% said they preferred to check the PDMP on their own, 17% did not understand how to allow delegates, and 15% said it was too much responsibility to share. Almost 1 in 3 (29%) had "Other" reasons for not having delegates, with this choice being statistically significant by role.

Among the 90 prescribers who *did* have delegates, information was collected on the number they had and the perceived helpfulness of the delegates. The majority had between 1 and 2 delegates, and when asked how many they would like to add, 90% said they would add 6 to 10. 80% of prescribers with delegates said that delegates were either extremely helpful or very helpful. Thus, although there is generally low interest in having authorized delegates in the overall sample of prescribers, this information suggests that a smaller subgroup of prescribers have roles and responsibilities that benefit from having two or more authorized delegates on their account.

Pharmacist perceptions and opinions about delegates were similar to prescribers. 74% of pharmacists were aware of their option to use delegates, but only 13% had any on their account. Among those pharmacists who did not have delegates, 20% were interested in having any on their account. The reasons for not having delegates were that they preferred to check on their own (67%), it was too much responsibility to share (29%), and that they did not trust anyone on their staff or did not understand how to allow them (11% each). About 1 in 4 pharmacists (23%) selected another reason.

Since the 13% of all pharmacists who *did* have delegates constituted only 10 respondents, these results are not included in the Appendix but are summarized here. Out of the 10 pharmacists with delegates, half had 1 to 2 delegates while the other half had 3 to 5 delegates. A majority (8 of the 10 pharmacists) would add 6 to 10 delegates if they could; 8 out of the 10 pharmacists also said delegates were extremely helpful or very helpful. Like the prescribers, this information suggests that a larger number of delegates may be valuable for a small percentage of overall pharmacists with a specific role or responsibility.

## SUMMARY

- Although a majority of both prescribers and pharmacists are aware of their option to use delegates, only a small minority of each group actually had any.
- Among those prescribers and pharmacists who did *not* have delegates, approximately 1 in 5 were interested in having any. The reasoning for not having delegates included preferring to check the PDMP on their own, feeling that it was too much responsibility to share, or that they did not understand how to allow delegate access.
- Among those prescribers and pharmacists who *did* have delegates, most had between one and two delegates but were interested in adding up to 10. Most respondents in this group also found delegates to be extremely or very helpful.
- Thus, although the use of delegates was not perceived to be necessary by PDMP users overall, a smaller subset of prescribers and pharmacists did find delegates to be valuable and could benefit from learning how to add more to their account.

# CONCLUSIONS

The 2021 PDMP Awareness and Feedback Questionnaire is part of an ongoing effort to assess how prescribers, pharmacists, and delegates in various roles utilize the PDMP for writing and reporting prescriptions, checking patient histories, and utilizing resources, as well as barriers and motivations for use. This year, additional questions were asked on several topics including prescription denial, PDMP resources, PDMP or report card enhancements, perceptions of delegates, and the impact of the COVID-19 pandemic on PDMP usage. Another change was to include veterinarian prescribers within the overall prescriber category, so that all prescriber users were asked the same set of questions in the survey.

This year, 1,134 respondents completed the survey. After removing those who did not work in Alaska or did not actively prescribe/fill prescriptions for federally scheduled II-IV controlled substances, the final sample was 773 respondents, although responses for individual questions were sometimes smaller. The initial and final samples this year are higher than the numbers from the 2020 survey, which indicates that efforts to reach more professionals to take the survey are working and should continue. In addition, early elimination of respondents who were less relevant to current PDMP usage (i.e. not living in Alaska or actively prescribing) is an improvement in survey design that should be preserved in the future.

Statistically significant differences across prescriber roles were found for several topics. The Appendix contains specific details of these differences and may be used in conjunction with this report to focus on areas of improvement by prescriber roles. Most often, dentists and veterinarians had responses that were distinct from the overall average across all prescribers, and PAs and NPs also sometimes responded differently from MDs. These distinct responses are likely because of differences in prescriber specialties and responsibilities that correspond to variations in how the PDMP is used. Veterinarians in particular appear to feel that the structure and requirements of the PDMP do not suit their needs, a finding that parallels what was found in last year's survey. Additional trainings or modified requirements for their usage should continue to be considered for this group. Also, while podiatrists and optometrists had their own categories within Prescriber roles, they were present in such small numbers that it is not possible to provide meaningful results for them. Since free-text responses to some questions indicate that the MD category is already composed of physicians from diverse specialties, one option is to add the optometrists and podiatrists to this category and rename it to "MD or Equivalent." An additional question could then be created for respondents in this category to select their specific specialty or training.

Regarding PDMP usage, there were several positive findings, while other findings indicate room for improvement:

- Although there was not much of an increase in **awareness of PDMP resources** compared to last year, the inclusion of items this year on how prescribers and pharmacists get information on the PDMP is useful. Results from these items suggest that it may be helpful to brainstorm

avenues besides state licensing boards through which to disseminate information about the PDMP, such as social media accounts or meetings of other affiliated professional organizations.

- While a majority of prescribers and pharmacists **check the PDMP to review history** for every patient being prescribed a controlled substance, as was found in 2020, efforts should be made to ensure that more PDMP users are doing this.
- Regarding **when the PDMP is reviewed** in the timeline of a patient's visit, just under half of prescribers review the PDMP prior to seeing the patient, a proportion that could also be improved. On the other hand, 86% of pharmacists review the PDMP when the patient drops off the prescription as opposed to after the patient leaves or when they come to pick it up—this is a promising finding.
- Regarding **reporting to the PDMP**, slightly more than half of all prescribers who dispense more than a 3-day supply of controlled substances said they never report prescriptions to the PDMP because they assume the pharmacist would do so after dispensing. Although efforts have been made to share information on this requirement, these efforts were hampered by the pandemic and should be continued to encourage clarity on the reporting rules for providers who directly dispense. Among pharmacists, on the other hand, most report to the PDMP daily either on their own or through automated software. Since automated reporting is now universally available, pharmacists and prescribers (especially those who directly dispense) should ensure that their respective software systems are updated to be able to do this.
- A majority of all prescribers, and 70% of pharmacists, reported **denying a prescription** to a patient in the past. For both groups, **PDMP information most commonly used** to deny the prescription pertained to the patient receiving too many prescriptions from the same or multiple providers or the prescription being part of a dangerous combination of therapies; NarxScore was considered a slightly less important factor in prescription denials. At least half of all prescribers and pharmacists also reported **using the resources in the PDMP** to guide their conversation with the patient. These findings suggest that PDMP users are utilizing appropriate and relevant information from the PDMP on controlled substances to deny prescriptions and discuss this with patients.
    - Since 40% of pharmacists who had denied a prescription did so because **they did not agree with the prescriber** (among other reasons), it may be useful to build more direct channels of communication between pharmacists and prescribers to confirm the prescription and patient history if needed.
- **Barriers to using the PDMP** tended to focus most often on not having enough time, the PDMP not being integrated into the EMR system, and limitations with internet access at work. Integrating certain kinds of PDMP data into the EMR system could be explored as a way of addressing this barrier. In addition, free-text responses suggested improving the interface and making it more user-friendly, and reducing the frequency of password changes that result in the user being locked out of their account.
- While 41% of prescribers also reported that office support staff not being authorized as delegates constituted a barrier to PDMP use, **overall interest in delegates among both**

**prescribers and pharmacists was low**. Based on other data from the survey, delegates appear to be considered useful among only a smaller subset of overall prescribers and pharmacists. Possibly, increased messaging around the usefulness of delegates, along with quotes from professionals who have had success adding and using delegates on their account, may enhance the use of delegates and ultimately use of the PDMP. Lastly, informational messaging about the PDMP should emphasize that delegates do not need to obtain any specific clinical license in order to be a delegate – any person regulated under AS 08, including permitted, certified, and registered individuals, may become a delegate. This information may increase the likelihood of PDMP users utilizing the benefits of delegates.

- Among the reasons **why professionals use the PDMP**, the most salient reasons entailed a desire to curb opioid misuse and an awareness that using the database is mandatory, as well as concerns about professional reputation (i.e., not being perceived as providing easy access to substances). Thus, while many professionals may only be using the PDMP to comply with requirements, it is encouraging that professional or ethical responsibility is also a motivating factor for prescribers and pharmacists.
- Finally, this year's items on **the role of COVID-19 in PDMP usage** suggest that while prescribers and pharmacists largely did not change their PDMP habits in the wake of the pandemic, in some cases prescribers felt that their patient reviews in the PDMP declined. Very likely, specific prescriber specialties played an important role in how their practices and prescribing needs were or were not affected during the pandemic. Since the U.S. cannot be said to be in a "post-pandemic" phase yet, these items should be retained for at least 1 more year of the survey to assess possible changes over time.

# APPENDIX A: METHODS

The 2021 PDMP Awareness and Feedback Questionnaire was sent to all registered PDMP users. The users had approximately one month; from June 10th to June 30th, 2021, to respond to the questionnaire.

To examine respondents' behaviors and attitudes, we conducted descriptive analyses that included frequencies by role to understand question response patterns. Additionally, Pearson chi-square tests were conducted to look for differences by professional prescriber role which were statistically significant; these results are discussed in the text where applicable. Specific details (such as level of significance or cases in which significance was not assessed due to low response rates) are provided in the Appendix. If there were skip patterns in the survey, this was accounted for in the analysis. For instance, for respondents who denied prescriptions, subsequent questions on the reasons for denial were analyzed only for those who *did* deny prescriptions, not the entire sample. In some cases, similar response options (such as "agree" and "strongly agree") were collapsed into new categories to create larger group sizes to improve the validity of significance tests.

# APPENDIX B: RESPONDENT BACKGROUND

**Table 1. Age by role for all questionnaire respondents**

| Role | < 30 Years Old | | 30-39 Years Old | | 40-49 Years Old | | 50+ Years Old | |
|---|---|---|---|---|---|---|---|---|
| | N | % | N | % | N | % | N | % |
| Dentist | 1 | 2% | 8 | 16% | 15 | 29% | 27 | 53% |
| Nurse Practitioner (includes APRN; NP, CNM, CNS, CRNA) | 1 | 1% | 21 | 15% | 29 | 21% | 88 | 63% |
| Optometrist | 0 | 0% | 0 | 0% | 1 | 50% | 1 | 50% |
| Pharmacist | 6 | 8% | 23 | 32% | 13 | 18% | 31 | 42% |
| Physician (MD, DO) | 0 | 0% | 25 | 12% | 48 | 23% | 136 | 65% |
| Physician Assistant | 1 | 1% | 12 | 18% | 18 | 26% | 37 | 54% |
| Podiatrist | 0 | 0% | 0 | 0% | 0 | 0% | 2 | 100% |
| Veterinarian | 0 | 0% | 9 | 24% | 11 | 30% | 17 | 46% |
| Delegate | 4 | 7% | 15 | 27% | 17 | 30% | 20 | 36% |
| Total | 13 | 2% | 113 | 18% | 152 | 24% | 359 | 56% |

*Note:* 637 participants responded to this demographic question.

## Table 2. Length of time using the PDMP by role for all questionnaire respondents

| Role | Never | | 1-6 Months | | 7-12 Months | | 1-2 Years | | 3-4 Years | | 5-6 Years | | 7+ Years | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | N | % | N | % | N | % | N | % | N | % | N | % | N | % |
| **Dentist** | 1 | 2% | 3 | 6% | 2 | 4% | 10 | 20% | 20 | 39% | 9 | 18% | 6 | 12% |
| **Nurse Practitioner (includes APRN; NP, CNM, CNS, CRNA)** | 1 | 1% | 7 | 5% | 10 | 7% | 29 | 21% | 40 | 29% | 25 | 18% | 28 | 20% |
| **Optometrist** | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 1 | 50% | 0 | 0% | 1 | 50% |
| **Pharmacist** | 0 | 0% | 3 | 4% | 5 | 7% | 6 | 8% | 17 | 23% | 17 | 23% | 25 | 34% |
| **Physician (MD, DO)** | 5 | 2% | 3 | 1% | 8 | 4% | 33 | 16% | 77 | 37% | 49 | 24% | 33 | 16% |
| **Physician Assistant** | 1 | 1% | 3 | 4% | 1 | 1% | 13 | 19% | 22 | 31% | 17 | 24% | 13 | 19% |
| **Podiatrist** | 0 | 0% | 0 | 0% | 0 | 0% | 1 | 50% | 0 | 0% | 1 | 50% | 0 | 0% |
| **Veterinarian** | 0 | 0% | 2 | 5% | 2 | 5% | 11 | 30% | 12 | 32% | 6 | 16% | 4 | 11% |
| **Delegate** | 0 | 0% | 5 | 9% | 7 | 13% | 14 | 25% | 17 | 30% | 8 | 14% | 5 | 9% |
| **Total** | 8 | 1% | 26 | 4% | 35 | 5% | 117 | 18% | 206 | 32% | 132 | 21% | 115 | 18% |

*Note:* 639 participants responded to this demographic question.

# APPENDIX C: AWARENESS OF PDMP RESOURCES

**Table 3a. Prescriber awareness of various resources related to the PDMP (Q91)**

| Role | AWARExE, PDMP, & Alaska.gov – what are these websites & what can I find on them? | Registration, reviewing & reporting requirements | Federal employee exemption FAQs | Unsolicited prescriber "report card" FAQs | PDMP registration reminder notices FAQs | Unsolicited Notifications | The "other" topics |
|---|---|---|---|---|---|---|---|
| **Dentist** | 23 (38%) | 32 (53%) | 12 (20%) | 7 (12%) | 17 (28%) | 4 (7%) | 4 (7%) |
| **Nurse Practitioner** | 73 (45%) | 74 (46%) | 24 (15%) | 19 (12%) | 51 (32%) | 11 (7%) | 6 (4%) |
| **Optometrist** | 1 (25%) | 1 (25%) | 0 (0%) | 0 (0%) | 0 (0%) | 1 (25%) | 0 (0%) |
| **Physician** | 95 (38%) | 100 (40%) | 24 (10%) | 25 (10%) | 68 (27%) | 19 (8%) | 17 (7%) |
| **Physician's Assistant** | 42 (52%) | 40 (49%) | 8 (10%) | 9 (11%) | 25 (31%) | 2 (3%) | 4 (5%) |
| **Podiatrist** | 0 (0%) | 2 (100%) | 0 (0%) | 0 (0%) | 2 (100%) | 0 (0%) | 0 (0%) |
| **Veterinarian** | 20 (47%) | 23 (54%) | 6 (14%) | 4 (9%) | 11 (26%) | 2 (5%) | 3 (7%) |
| **Total** | 254 (42%) | 272 (45%) | 74(12%) | 64 (11%) | 174 (29%) | 39 (7%) | 34 (6%) |

*Note:* Differences by role were not statistically significant for any of the resources. Percents add up to more than 100 because respondents could indicate awareness of multiple resources.

**Table 3b. Pharmacist awareness of various resources related to the PDMP (Q34)**

| | N | % |
|---|---|---|
| **AWARExE, PDMP, & Alaska.gov – what are these websites & what can I find on them?** | 41 | 40% |
| **Registration, reviewing & reporting requirements** | 41 | 40% |
| **Federal employee exemption FAQs** | 14 | 14 |
| **Unsolicited prescriber "report card" FAQs** | 8 | 8% |
| **PDMP registration reminder notices FAQs** | 22 | 22% |
| **Unsolicited Notifications** | 5 | 5% |
| **The "other" topics** | 6 | 6% |

*Note*: Percents add up to more than 100% because respondents could indicate awareness of multiple resources.

### Table 4a. Prescriber rating of how helpful it was to interact with state boards (Q87)

| Role | Extremely, very or somewhat helpful | | Not so/at all helpful | | I have not attempted to contact | |
|---|---|---|---|---|---|---|
| | N | % | N | % | N | % |
| **Dentist** | 20 | 38% | 12 | 23% | 21 | 40% |
| **Nurse Practitioner** | 56 | 39% | 24 | 17% | 65 | 45% |
| **Optometrist** | 1 | 50% | 0 | 0% | 1 | 50% |
| **Physician** | 87 | 41% | 32 | 15% | 95 | 44% |
| **Physician's Assistant** | 29 | 41% | 8 | 11% | 34 | 48% |
| **Podiatrist** | 2 | 100% | 0 | 0% | 0 | 0% |
| **Veterinarian** | 8 | 21% | 18 | 47% | 12 | 32% |
| **Total** | 203 | 39% | 94 | 18% | 228 | 43% |

*Note:* 525 participants responded to this question. Differences by role were statistically significant $\chi^2(12) = 30.850$, $p < 0.01$.

### Table 4b. Pharmacist rating of how helpful it was to interact with state boards (Q30)

| | N | % |
|---|---|---|
| **Extremely helpful** | 8 | 11% |
| **Very helpful** | 17 | 23% |
| **Somewhat helpful** | 13 | 17% |
| **Not so helpful** | 8 | 11% |
| **Not at all helpful** | 1 | 1% |
| **I have not attempted to contact the Board of Pharmacy** | 28 | 37% |
| **Total** | 75 | 100% |

### Table 5a. Physicians – Do you attend meetings held by your licensing board? (Q88)

| Role | Always | | Sometimes | | Never | | Did not know they held regular meetings | |
|---|---|---|---|---|---|---|---|---|
| | N | % | N | % | N | % | N | % |
| Dentist | 3 | 6% | 14 | 26% | 24 | 45% | 12 | 23% |
| Nurse Practitioner | 1 | 1% | 34 | 23% | 70 | 48% | 40 | 28% |
| Optometrist | 0 | 0% | 1 | 50% | 1 | 50% | 0 | 0% |
| Physician | 1 | 1% | 28 | 13% | 124 | 58% | 61 | 29% |
| Physician's Assistant | 1 | 1% | 10 | 14% | 43 | 61% | 17 | 24% |
| Podiatrist | 0 | 0% | 0 | 0% | 2 | 100% | 0 | 0% |
| Veterinarian | 2 | 5% | 20 | 53% | 13 | 34% | 3 | 8% |
| Total | 8 | 2% | 107 | 20% | 277 | 53% | 133 | 25% |

*Note:* 525 respondents answered this question, with results being statistically significant by role at $\chi 2(12) = 54.26$, $p < 0.0001$

### Table 5b. Pharmacists' attendance of Board of Pharmacy meetings (Q31)

| Do you attend meetings held by the Board of Pharmacy? | Number and percent of pharmacists reporting | |
|---|---|---|
| | N | % |
| Always | 1 | 1% |
| Sometimes | 21 | 28% |
| Never | 47 | 63% |
| I did not know they held regular meetings | 6 | 8% |
| Total | 75 | 100% |

### Table 6a. Physicians – Are you subscribed to Board listservs? (Q89)

| Role | Yes | | No | | Did not know there was a list serv | |
|---|---|---|---|---|---|---|
| | N | % | N | % | N | % |
| Dentist | 11 | 21% | 14 | 26% | 28 | 53% |
| Nurse Practitioner | 43 | 30% | 50 | 35% | 52 | 36% |
| Optometrist | 1 | 50% | 0 | 0% | 1 | 50% |
| Physician | 32 | 15% | 69 | 32% | 113 | 53% |
| Physician's Assistant | 16 | 23% | 18 | 25% | 37 | 52% |
| Podiatrist | 0 | 0% | 1 | 50% | 1 | 50% |
| Veterinarian | 25 | 66% | 6 | 16% | 7 | 18% |
| Total | 128 | 24% | 158 | 30% | 239 | 46% |

*Note*: 525 respondents answered this question. Results are statistically significant by role with $\chi 2(12) = 55.98$, $p < 0.0001$

### Table 6b. Pharmacists – are you subscribed to Board of Pharmacy listserv (Q32)

| Are you subscribed to the Board of Pharmacy listserv which provides updates, communication, and information about the Board of Pharmacy meetings? | Number and percent of pharmacists reporting | |
|---|---|---|
| | N | % |
| Yes | 47 | 63% |
| No | 10 | 13% |
| I did not know there was a listserv | 18 | 24% |
| Total | 75 | 100% |

# APPENDIX D: USE OF PDMP IN REVIEWING & REPORTING

**Table 7. Do you prescribe/dispense controlled substances, by role (Q53, 3)**

| Role | Yes | | No | | No, I am retired | |
|---|---|---|---|---|---|---|
| | N | % | N | % | N | % |
| Dentist | 60 | 87% | 7 | 10% | 2 | 3% |
| Nurse Practitioner | 162 | 87% | 23 | 12% | 2 | 1% |
| Optometrist | 4 | 31% | 9 | 69% | 0 | 0% |
| Pharmacist | 102 | 100% | 0 | 0% | 0 | 0% |
| Physician | 250 | 80% | 54 | 17% | 9 | 3% |
| Physician's Assistant | 81 | 94% | 4 | 5% | 1 | 1% |
| Podiatrist | 2 | 100% | 0 | 0% | 0 | 0% |
| Veterinarian | 43 | 91% | 4 | 9% | 0 | 0% |

*Note:* 819 users answered this question.

**Table 8a. Frequency of reviewing patient history in the PDMP when prescribing controlled substances, by prescriber role (Q56)**

| Role | Every time prescribe | | Daily | | Weekly | | Monthly | | Quarterly | | Annually | | Never | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | N | % | N | % | N | % | N | % | N | % | N | % | N | % |
| Dentist | 24 | 41% | 2 | 3% | 1 | 2% | 7 | 12% | 8 | 14% | 5 | 9% | 11 | 19% |
| Nurse Practitioner | 11 | 77% | 3 | 2% | 6 | 4% | 6 | 4% | 7 | 4% | 4 | 3% | 11 | 7% |
| Optometrist | 2 | 67% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 1 | 33% |
| Physician | 147 | 61% | 13 | 5% | 14 | 6% | 22 | 9% | 13 | 5% | 7 | 3% | 26 | 11% |
| Physician's Assistant | 54 | 68% | 6 | 8% | 6 | 8% | 4 | 5% | 5 | 6% | 2 | 3% | 3 | 4% |
| Podiatrist | 1 | 50% | 0 | 0% | 0 | 0% | 0 | 0% | 1 | 50% | 0 | 0% | 0 | 0% |
| Veterinarian | 18 | 42% | 0 | 0% | 0 | 0% | 2 | 5% | 4 | 9% | 1 | 2% | 18 | 42% |
| Total | 368 | 63% | 24 | 4% | 27 | 5% | 41 | 7% | 38 | 7% | 19 | 3% | 70 | 12% |

*Note:* 587 users answered this question. Differences by role were statistically significant $\chi^2(36) = 95.75$, $p < .0001$.

### Table 8b. Frequency of reviewing patient history in the PDMP when prescribing controlled substances, pharmacists (Q22)

| | N | % |
|---|---|---|
| **Every time** | 49 | 65% |
| **Daily** | 9 | 12% |
| **Weekly** | 3 | 4% |
| **Monthly** | 1 | 1% |
| **Quarterly** | 1 | 1% |
| **Never** | 13 | 17% |
| **Total** | 76 | 100% |

### Table 9a. When PDMP patient review is occurring, by prescriber role (Q57)

| Role | Prior to seeing the patient | | While the patient is in the room | | After the patient leaves | | Never, I assume the pharmacist will review before dispensing | |
|---|---|---|---|---|---|---|---|---|
| | **N** | **%** | **N** | **%** | **N** | **%** | **N** | **%** |
| **Dentist** | 13 | 22% | 33 | 57% | 5 | 9% | 7 | 12% |
| **Nurse Practitioner** | 99 | 62% | 43 | 27% | 13 | 8% | 4 | 3% |
| **Optometrist** | 0 | 0.0% | 2 | 67% | 1 | 33% | 0 | 0% |
| **Physician** | 114 | 48% | 76 | 32% | 33 | 14% | 13 | 6% |
| **Physician's Assistant** | 39 | 49% | 32 | 40% | 8 | 10% | 1 | 1% |
| **Podiatrist** | 0 | 0.0% | 1 | 50% | 1 | 50% | 0 | 0% |
| **Veterinarian** | 2 | 5% | 17 | 41% | 7 | 17% | 16 | 38% |
| **Total** | 267 | 46% | 204 | 35% | 68 | 12% | 41 | 7% |

*Note:* 580 users answered this question. Differences by role were statistically significant $\chi^2$ (18) = 124.45, $p < .0001$.

### Table 9b. When PDMP patient review is occurring, for pharmacists (Q10)

| | N | % |
|---|---|---|
| **When the patient drops off the prescription** | 70 | 86% |
| **When the patient comes to pick up prescription** | 3 | 4% |
| **After the patient leaves** | 4 | 5% |
| **Never, since I am not required to review** | 4 | 5% |
| **Total** | 81 | 100% |

### Table 10a. What patients do you generally check in the PDMP, prescribers? (Q62)

| Role | Every patient regardless of Rx | | Every patient I am prescribing a controlled substance to | | Patients who look suspicious | | Patients with known substance misuse | | Patients who request a specific controlled substance | | Patients with known behavioral health issues | | Other | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | N | % | N | % | N | % | N | % | N | % | N | % | N | % |
| **Dentist** | 2 | 3% | 30 | 50% | 11 | 18% | 18 | 30% | 22 | 37% | 14 | 23% | 8 | 13% |
| **Nurse Practitioner** | 19 | 12% | 120 | 74% | 7 | 4% | 40 | 25% | 56 | 35% | 19 | 12% | 22 | 14% |
| **Optometrist** | 1 | 25% | 1 | 25% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 1 | 25% |
| **Physician** | 12 | 5% | 165 | 66% | 16 | 6% | 58 | 23% | 68 | 27% | 21 | 8% | 40 | 16% |
| **Physician's Assistant** | 7 | 9% | 63 | 78% | 9 | 11% | 21 | 26% | 33 | 41% | 13 | 16% | 7 | 9% |
| **Podiatrist** | 0 | 0% | 1 | 50% | 0 | 0% | 0 | 0% | 0 | 0% | 1 | 50% | 0 | 0% |
| **Veterinarian** | 0 | 0% | 17 | 40% | 0 | 0% | 0 | 0% | 3 | 7% | 0 | 0% | 24 | 56% |
| **Total** | 41 | 7% | 397 | 66% | 43 | 7% | 137 | 23% | 182 | 30% | 68 | 11% | 102 | 17% |

*Note:* This question allowed respondents to select all that applied. Statistically significant differences occurred by role for: checking the PDMP for each patient regardless of Rx $\chi^2(6) = 14.71$, $p = .02$, for every patient they are prescribing controlled substances to $\chi^2(6) = 33.18$, $p < .0001$, for patients that looked suspicious $\chi^2(6) = 19.17$, $p = .004$, for patients with known substance misuse $\chi^2(6) = 17.06$, $p = .009$, for patients who request a specific controlled substance $\chi^2(6) = 21.58$, $p = .001$, for patients with known behavioral health issues $\chi^2(6) = 21.60$, $p = .001$, and for other reasons $\chi^2(6) = 52.74$, $p < .0001$.

### Table 10b. What patients do you generally check in the PDMP, for pharmacists (Q11)

| | N | % |
|---|---|---|
| **Every patient regardless of Rx** | 1 | 1% |
| **Every patient I am prescribing a controlled substance to** | 60 | 59% |
| **Patients who look suspicious** | 10 | 10% |
| **Patients with known substance misuse** | 17 | 17% |
| **Patients with known behavioral health issues** | 11 | 11% |
| **Patients with a prescription by a specific provider** | 16 | 16 |
| **Other** | 16 | 16% |

*Note:* 131 users answered this question. Percent adds up to more than 100% because multiple selection was possible.

### Table 11a. Frequency of reporting prescriptions to the PDMP, for prescribers (Q64)

| Role | While the patient is still present/in the room | | As soon as the patient leaves | | At some point throughout the day | | Weekly | | Monthly | | I only report when I directly dispense a controlled substance | | Never, I assume the pharmacist will report after dispensing | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | N | % | N | % | N | % | N | % | N | % | N | % | N | % |
| **Dentist** | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 1 | 50% | 1 | 50% |
| **Nurse Practitioner** | 7 | 16% | 3 | 7% | 1 | 2% | 0 | 0% | 1 | 2% | 11 | 26% | 20 | 47% |
| **Physician** | 5 | 7% | 3 | 4% | 5 | 7% | 0 | 0% | 1 | 1% | 16 | 20% | 49 | 62% |
| **Physician's Assistant** | 0 | 0% | 5 | 23% | 1 | 5% | 2 | 9% | 0 | 0% | 6 | 27% | 8 | 36% |
| **Veterinarian** | 0 | 0% | 0 | 0% | 2 | 15% | 1 | 8% | 1 | 8% | 5 | 39% | 4 | 31% |
| **Total** | 12 | 8% | 11 | 7% | 9 | 6% | 3 | 2% | 3 | 2% | 3 | 24% | 82 | 52% |

*Note:* This question was analyzed only for the 159 respondents who answered in the previous question that they directly dispense greater than a 3-day supply of federally scheduled II-IV controlled substances. 157 of those respondents answered this question. Chi-square tests were not performed for this question due to small cell sizes.

### Table 11b. Frequency of reporting prescriptions to the PDMP, for pharmacists (Q21)

| | N | % |
|---|---|---|
| **Daily** | 37 | 47% |
| **Weekly** | 1 | 1% |
| **Monthly** | 1 | 1% |
| **I only report when I directly dispense a controlled substance** | 2 | 3% |
| **My software does this automatically on a daily basis** | 35 | 45% |
| **Never** | 2 | 3% |
| **Total** | 78 | 100% |

# APPENDIX E: DENYING PRESCRIPTIONS

### Table 12a. Prescribers who denied a prescription to a patient (Q58)

| Role | Yes, denied | | No, haven't denied | |
|---|---|---|---|---|
| | N | % | N | % |
| Dentist | 27 | 47% | 31 | 53% |
| Nurse Practitioner | 100 | 63% | 59 | 37% |
| Optometrist | 0 | 0% | 3 | 100% |
| Physician | 138 | 59% | 98 | 42% |
| Physician's Assistant | 63 | 79% | 17 | 21% |
| Podiatrist | 1 | 50% | 1 | 50% |
| Veterinarian | 1 | 2% | 41 | 98% |
| Total | 330 | 57% | 250 | 43% |

*Note:* 580 respondents answered this question. Differences by role were statistically significant $\chi^2(6) = 75.58$, $p < .0001$.

### Table 12b. Pharmacists who denied a prescription to a patient (Q6)

| | N | % |
|---|---|---|
| Yes, denied | 65 | 70% |
| No, haven't denied | 28 | 30% |
| Total | 93 | 100% |

## Table 13a. Reasons for denying patients a prescription, by prescriber role (Q59)

| Role | Dangerous combination of treatment | | High MME | | Number of opioid prescription days | | Overlapping of opioid prescriptions | | Multiple provider episodes for prescription opioids | | The patient looks suspicious | | Other | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | N | % | N | % | N | % | N | % | N | % | N | % | N | % |
| **Dentist** | 3 | 11% | 6 | 22% | 10 | 37% | 13 | 48% | 12 | 44% | 1 | 4% | 1 | 4% |
| **Nurse Practitioner** | 50 | 50% | 25 | 25% | 24 | 24% | 58 | 58% | 49 | 49% | 5 | 5% | 15 | 15% |
| **Optometrist** | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0.% | 0 | 0% | 0 | 0% | 0 | 0% |
| **Physician** | 67 | 49% | 35 | 25% | 28 | 20% | 100 | 73% | 77 | 56% | 3 | 2% | 13 | 9% |
| **Physician's Assistant** | 31 | 49% | 18 | 29% | 17 | 27% | 29 | 46% | 33 | 52% | 1 | 2% | 6 | 10% |
| **Podiatrist** | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 1 | 100% |
| **Veterinarian** | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 1 | 100% | 0 | 0% |
| **Total** | 151 | 46% | 84 | 26% | 79 | 24% | 200 | 61% | 171 | 59% | 11 | 3% | 36 | 11% |

*Note:* This item was analyzed only for those prescribers who reported ever denying a prescription. Responses add up to more than 100% because respondents could select more than one option. Differences by role were statistically significant for prescribers who chose that they denied a prescription because: it was a dangerous combination of treatments $\chi^2(5) = 16.21$, $p < .006$, because of overlapping of opioid prescriptions $\chi^2(5) = 18.85$, $p = .002$.

## Table 13b. Reasons for denying patients a prescription, for pharmacists (Q7)

| | N | % |
|---|---|---|
| **Not in the best interest of the patient** | 52 | 80% |
| **Did not agree with prescriber** | 26 | 40% |
| **Not in the usual course of medical treatment** | 27 | 42% |
| **Patient had traveled a long distance to obtain prescription** | 17 | 26% |
| **Patient had a history of paying higher prices for medication** | 7 | 11% |

*Note:* This table presents responses for the 65 respondents who answered in the previous question they had denied a prescription. Responses add up to more than 100% because respondents could select more than one option.

### Table 14a. What information in PDMP was helpful for denial, by prescriber role (Q60)

| Role | High NarxScore | | Was on dangerous combination therapies | | Had received too many prescriptions from the same or multiple providers | | Other | |
|---|---|---|---|---|---|---|---|---|
| | N | % | N | % | N | % | N | % |
| **Dentist** | 5 | 19% | 4 | 15% | 24 | 89% | 1 | 4% |
| **Nurse Practitioner** | 16 | 16% | 46 | 46% | 81 | 81% | 12 | 12% |
| **Optometrist** | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| **Physician** | 20 | 15% | 61 | 44% | 117 | 85% | 11 | 8% |
| **Physician's Assistant** | 15 | 24% | 34 | 54% | 47 | 75% | 6 | 10% |
| **Podiatrist** | 0 | 0% | 0 | 0% | 0 | 0% | 1 | 100% |
| **Veterinarian** | 0 | 0% | 0 | 0% | 1 | 100% | 0 | 0% |
| **Total** | 56 | 17% | 145 | 44% | 270 | 82% | 31 | 9% |

*Note:* This question allowed respondents to select multiple options, but was analyzed only for those reporting that they have denied a prescription. Differences by role were statistically significant for prescribers who said they denied prescriptions due to dangerous combination therapies $\chi^2(5) = 13.61$, $p = 0.02$.

### Table 14b. What information in PDMP was helpful for denial, for pharmacists (Q8)

| | N | % |
|---|---|---|
| **High NarxScore** | 17 | 26% |
| **Was on dangerous combination therapies** | 33 | 51% |
| **Had received too many prescriptions from the same or multiple providers** | 57 | 88% |

*Note:* This table analyzes responses for the 65 respondents who answered they had denied a prescription. Respondents could select multiple options for this question.

## Table 15a. Result of prescription denial due to PDMP, by prescriber role (Q61)

| Role | I discussed my concerns with the patient | | I used the resources in the PDMP to guide my conversation with the patient | | I just said no | | I referred the patient to another provider | | Other | |
|---|---|---|---|---|---|---|---|---|---|---|
| | N | % | N | % | N | % | N | % | N | % |
| **Dentist** | 17 | 63% | 7 | 26% | 4 | 15% | 1 | 4% | 2 | 7% |
| **Nurse Practitioner** | 90 | 90% | 57 | 57% | 8 | 8% | 14 | 14% | 6 | 6% |
| **Optometrist** | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| **Physician** | 108 | 78% | 78 | 57% | 15 | 11% | 16 | 12% | 7 | 5% |
| **Physician's Assistant** | 50 | 79% | 34 | 54% | 14 | 22% | 9 | 14% | 2 | 3% |
| **Podiatrist** | 1 | 100% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| **Veterinarian** | 0 | 0% | 0 | 0% | 1 | 100% | 0 | 0% | 0 | 0% |
| **Total** | 266 | 81% | 176 | 53% | 42 | 13% | 40 | 12% | 17 | 5% |

*Note:* Differences by role were statistically significant for prescribers who discussed their concerns with the patient $\chi^2(5) = 15.97$, $p = .007$, prescribers who used the resources in the PDMP to guide their conversation with the patient $\chi^2(5) = 11.55$, $p < .04$, and prescribers who just said no $\chi^2(5) = 14.66$, $p = .01$

## Table 15b. Result of prescription denial due to PDMP, pharmacists (Q9)

| | N | % |
|---|---|---|
| **I discussed my concerns with the patient** | 50 | 77% |
| **I used the resources in the PDMP to guide my conversation with the patient** | 32 | 49% |
| **I just said no** | 6 | 9% |
| **I referred the patient back to their provider** | 38 | 59% |
| **Other** | 15 | 23% |

*Note:* This table analyzes responses for the 65 respondents who answered they had denied a prescription. Respondents could select more than one option for this question.

# APPENDIX F: PDMP CHALLENGES AND REASONS FOR USE

**Table 16. Experience of barriers, by prescriber role (Q65)**

| Role | Yes, experienced barriers | | No, did not experience barriers | |
|---|---|---|---|---|
| | N | % | N | % |
| Dentist | 15 | 26% | 43 | 74% |
| Nurse Practitioner | 34 | 22% | 123 | 78% |
| Optometrist | 0 | 0% | 3 | 100% |
| Physician | 70 | 30% | 161 | 70% |
| Physician's Assistant | 18 | 23% | 61 | 77% |
| Podiatrist | 0 | 0% | 2 | 100% |
| Veterinarian | 37 | 90% | 4 | 10% |
| Total | 174 | 31% | 397 | 70% |

*Note:* Differences by role were statistically significant $\chi^2(6) = 79.88$, $p < .0001$.

**Table 17a. Challenges with using the PDMP system and platform, by prescriber role (Q66)**

| Role | Limitations with Internet access at work | | Not enough time | | Office support staff not authorized to be delegates | | Lack of training on how to access the PDMP | | The PDMP is not integrated into EMR system | | Other | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | N | % | N | % | N | % | N | % | N | % | N | % |
| Dentist | 5 | 33% | 10 | 67% | 7 | 47% | 3 | 20% | 8 | 53% | 5 | 33% |
| Nurse Practitioner | 8 | 24% | 16 | 47% | 12 | 35% | 6 | 18% | 16 | 47% | 16 | 47% |
| Optometrist | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| Physician | 20 | 29% | 45 | 64% | 26 | 37% | 5 | 7% | 35 | 50% | 30 | 43% |
| Physician's Assistant | 4 | 22% | 11 | 61% | 9 | 50% | 2 | 11% | 13 | 72% | 10 | 56% |
| Podiatrist | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| Veterinarian | 7 | 19% | 27 | 73% | 17 | 46% | 14 | 38% | 18 | 49% | 29 | 78% |
| Total | 44 | 25% | 109 | 63% | 71 | 41% | 30 | 17% | 90 | 52% | 90 | 52% |

*Note:* Types of barriers represent a question where respondents could select multiple options. This table shows percentages out of the 174 respondents who had any barriers based on the previous question. Since multiple barriers could be selected, percentages add up to more than 100%. Differences by role were statistically significant for prescribers who chose lack of training on how to access the PDMP $\chi^2(4) = 16.56$, $p = 0.002$, and prescribers who chose other $\chi^2(4) = 15.17$, $p = .004$.

## Table 17b. Challenges with Using the PDMP System and Platform, for pharmacists (Q13)

| | N | % |
|---|---|---|
| *No barriers* | 61 | 75% |
| *Yes, experience barriers* | 20 | 25% |
| Limitations with Internet access at work | 4 | 20% |
| Not enough time | 11 | 55% |
| Office support staff not authorized to be delegates | 3 | 15% |
| Lack of training on how to access the PDMP | 0 | 0% |
| The PDMP is not integrated into EMR system | 6 | 30% |
| Other | 9 | 45% |

*Note:* 81 users answered this question. Respondents who reported barriers could select multiple challenges, so responses add up to more than 100%.

## Table 18a. Reasons prescribers reported using the PDMP, by role (Q67)

| Selected Answer | Dentist | | Nurse Practitioner | | Optometrist | | Physician | | Physician's Assistant | | Podiatrist | | Veterin-arian | | Total | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **It reduces prescription opioid use** | 30 | 50% | 119 | 74% | 1 | 25% | 154 | 62% | 65 | 80% | 1 | 50% | 0 | 0% | 370 | 62% |
| **For self-preservation** | 15 | 25% | 54 | 33% | 0 | 0% | 64 | 26% | 36 | 44% | 0 | 0% | 6 | 14% | 175 | 29% |
| **It is my moral and ethical obligation to do so** | 22 | 37% | 92 | 57% | 0 | 0% | 97 | 39% | 49 | 61% | 0 | 0% | 3 | 7% | 263 | 44% |
| **It is mandatory to do so** | 32 | 53% | 89 | 55% | 1 | 25% | 131 | 52% | 55 | 68% | 0 | 0% | 26 | 61% | 334 | 56% |
| **I am making a difference** | 7 | 12% | 50 | 31% | 0 | 0% | 58 | 23% | 32 | 40% | 0 | 0% | 0 | 0% | 147 | 24% |
| **To not contribute to abuse, misuse, or addiction** | 39 | 65% | 121 | 75% | 1 | 25% | 172 | 69% | 64 | 79% | 2 | 100% | 4 | 9% | 403 | 67% |
| **To not be perceived as a problematic prescriber** | 14 | 23% | 49 | 30% | 0 | 0% | 62 | 25% | 25 | 31% | 0 | 0% | 2 | 5% | 152 | 25% |
| **To not be viewed by patients as an easy prescriber** | 24 | 40% | 68 | 42% | 0 | 0% | 78 | 31% | 35 | 43% | 0 | 0% | 1 | 2% | 206 | 34% |
| **Only use the PDMP to comply with mandatory requirements** | 14 | 23% | 11 | 7% | 0 | 0% | 25 | 10% | 9 | 11% | 0 | 0% | 30 | 70% | 89 | 15% |
| **Other** | 1 | 2% | 10 | 6% | 0 | 0% | 14 | 6% | 5 | 6% | 0 | 0% | 8 | 19% | 38 | 6% |

*Note:* 602 users answered this question. Statistically significant differences occurred by role for the following individual items: reduces prescription opioid misuse $\chi2(6) = 96.17$, $p < .0001$, for self-preservation $\chi2(6) = 19.88$, $p = .003$, because it is their moral and ethical obligation to do so $\chi2(6) = 52.45$, $p < .0001$, because they are making a difference $\chi2(6) = 34.96$, $p < .0001$, to not contribute to abuse $\chi2(6) = 78.95$, $p < .0001$, to not be perceived as a problematic prescriber $\chi2(6) = 15.33$, $p = .02$, to not be viewed by patients as an easy prescriber $\chi2(6) = 31.69$, $p < .0001$, because they only use PDMP to comply with mandatory requirements $\chi2(6) = 121.33$, $p < .000$, and other reasons $\chi2(6) = 13.80$, $p = .03$.

## Table 18b. Reasons pharmacists reported using the PDMP, by role (Q14)

| Selected Answer | Number and percent of pharmacists reporting | |
|---|---|---|
| | N | % |
| For self-preservation | 30 | 29% |
| It is my moral and ethical obligation to do so | 58 | 57% |
| It is mandatory to do so | 45 | 44% |
| I am making a difference | 38 | 37% |
| To not contribute to abuse, misuse, or addiction | 73 | 72% |
| To not be perceived as a problematic prescriber | 23 | 23% |
| To not be viewed by patients as an easy provider | 40 | 39% |
| Only use the PDMP to comply with mandatory requirements | 4 | 4% |
| Other | 7 | 7% |

# APPENDIX G: IMPACT OF COVID-19

**Table 19a. COVID-19 has affected PDMP use, by prescriber role (Q92)**

| Role | Agree or Somewhat Agree | | Neither Agree nor Disagree | | Disagree or Somewhat Disagree | |
|---|---|---|---|---|---|---|
| | N | % | N | % | N | % |
| Dentist | 15 | 28.8% | 15 | 28.8% | 22 | 42% |
| Nurse Practitioner | 28 | 19.9% | 32 | 22.7% | 81 | 57% |
| Optometrist | 0 | 0% | 2 | 100% | 0 | 0% |
| Physician | 33 | 15.6% | 62 | 29.4% | 116 | 55% |
| Physician's Assistant | 13 | 18.3% | 17 | 23.9% | 41 | 58% |
| Podiatrist | 0 | 0% | 1 | 50% | 1 | 50% |
| Veterinarian | 6 | 16.2% | 10 | 27.0% | 21 | 57% |
| Total | 95 | 18.4% | 139 | 26.9% | 282 | 55% |

*Note:* 516 users answered this question. Differences by role were not statistically significant.

**Table 19b. COVID-19 has affected PDMP use, for pharmacists (Q35)**

| The COVID-19 pandemic has affected my PDMP use | Number and percent of pharmacists reporting | |
|---|---|---|
| | N | % |
| Agree | 3 | 4% |
| Somewhat Agree | 6 | 8% |
| Neither Agree nor Disagree | 16 | 22% |
| Somewhat Disagree | 8 | 11% |
| Disagree | 41 | 55% |
| Total | 74 | 100% |

### Table 20a. Increase in patient queries in PDMP due to COVID-19, by prescriber role (Q93)

| Role | Agree or Somewhat Agree | | Neither Agree nor Disagree | | Disagree or Somewhat Disagree | |
|---|---|---|---|---|---|---|
| | N | % | N | % | N | % |
| Dentist | 2 | 4% | 14 | 27% | 36 | 69% |
| Nurse Practitioner | 13 | 9% | 31 | 22% | 97 | 69% |
| Optometrist | 0 | 0% | 2 | 100% | 0 | 0% |
| Physician | 6 | 3% | 59 | 28% | 146 | 69% |
| Physician's Assistant | 4 | 6% | 19 | 27% | 48 | 68% |
| Podiatrist | 0 | 0% | 1 | 50% | 1 | 50% |
| Veterinarian | 3 | 8% | 7 | 19% | 27 | 73% |
| Total | 28 | 5% | 133 | 26% | 355 | 69% |

*Note:* 516 users answered this question. Differences by role were not statistically significant.

### Table 20b. Increase in patient queries in PDMP due to COVID-19, for pharmacists (Q36)

| I have increased my patient queries due to seeing more patients during the pandemic. | Number and percent of pharmacists reporting | |
|---|---|---|
| | N | % |
| Agree | 2 | 3% |
| Somewhat Agree | 3 | 4% |
| Neither Agree nor Disagree | 23 | 31% |
| Somewhat Disagree | 6 | 8% |
| Disagree | 40 | 54% |
| Total | 74 | 100% |

### Table 21a. Decrease in patient reviews due to COVID-19 because they have not seen patients as frequently, by prescriber role (Q94)

| Role | Agree or Somewhat Agree | | Neither Agree nor Disagree | | Disagree or Somewhat Disagree | |
|---|---|---|---|---|---|---|
| | N | % | N | % | N | % |
| Dentist | 23 | 44% | 14 | 27% | 15 | 29% |
| Nurse Practitioner | 35 | 25% | 27 | 19% | 79 | 56% |
| Optometrist | 0 | 0% | 1 | 50% | 1 | 50% |
| Physician | 50 | 24% | 62 | 29% | 99 | 47% |
| Physician's Assistant | 25 | 35% | 19 | 27% | 27 | 38% |
| Podiatrist | 2 | 100% | 0 | 0% | 0 | 0% |
| Veterinarian | 6 | 16% | 8 | 22% | 23 | 62% |
| Total | 141 | 27% | 131 | 25% | 244 | 47% |

*Note:* 516 users answered this question. Differences by role were statistically significant $\chi^2(12) = 29.25$, $p = .004$.

### Table 21b. Decrease in patient reviews due to COVID-19 because they have not seen patients as frequently, for pharmacists (Q37)

| I have reviewed less patients because I have not seen my patients as frequently. | Number and percent of pharmacists reporting | |
|---|---|---|
| | N | % |
| Agree | 4 | 5% |
| Somewhat Agree | 4 | 5% |
| Neither Agree nor Disagree | 19 | 26% |
| Somewhat Disagree | 6 | 8% |
| Disagree | 41 | 55% |
| Total | 74 | 100% |

# APPENDIX H: UTILIZATION OF DELEGATES

### Table 22a. Awareness of option to use delegates, physicians (79)

| Role | Yes | | No | |
|---|---|---|---|---|
| | N | % | N | % |
| Dentist | 20 | 37% | 34 | 63% |
| Nurse Practitioner | 87 | 60% | 59 | 40% |
| Optometrist | 0 | 0 | 2 | 100% |
| Physician | 138 | 64% | 79 | 36% |
| Physician's Assistant | 50 | 70% | 21 | 30% |
| Podiatrist | 1 | 50% | 1 | 50% |
| Veterinarian | 28 | 72% | 11 | 28% |
| Total | 324 | 61% | 207 | 39% |

*Note:* 531 respondents answered this question. Differences by role were statistically significant $\chi^2(6) = 21.564$, $p = 0.001$.

### Table 23a. Do you have authorized delegates on your account, physicians (Q80)

| Role | Yes | | No | |
|---|---|---|---|---|
| | N | % | N | % |
| Dentist | 2 | 4% | 52 | 96% |
| Nurse Practitioner | 19 | 13% | 127 | 87% |
| Optometrist | 0 | 0% | 2 | 100% |
| Physician | 49 | 23% | 168 | 77% |
| Physician's Assistant | 11 | 16% | 60 | 85% |
| Podiatrist | 1 | 50% | 1 | 50% |
| Veterinarian | 8 | 21% | 31 | 80% |
| Total | 90 | 17% | 441 | 83% |

*Note:* 531 respondents answered this question. Differences by role were statistically significant $\chi^2(6) = 15.645$, $p = 0.016$.

## Table 24a. Interest in having delegates, physicians (Q81)

| Role | Yes | | No | |
|---|---|---|---|---|
| | N | % | N | % |
| Dentist | 19 | 37% | 33 | 64% |
| Nurse Practitioner | 25 | 20% | 102 | 80% |
| Optometrist | 0 | 0% | 2 | 100% |
| Physician | 37 | 22% | 131 | 78% |
| Physician's Assistant | 11 | 18% | 49 | 82% |
| Podiatrist | 0 | 0% | 1 | 100% |
| Veterinarian | 0 | 0% | 30 | 100% |
| Total | 92 | 21% | 348 | 79% |

*Note:* This item analyzes data for the 441 respondents who answered that they do not have delegates. 440 respondents answered this question. Differences by role were statistically significant $\chi^2(6) = 16.887$, $p = 0.01$.

## Table 25a. Reasons for not having delegates, physicians (Q82)

| Role | Too much responsibility to share | | Don't trust anyone on my staff | | Don't understand how to allow them | | I prefer to check on my own | | Other | |
|---|---|---|---|---|---|---|---|---|---|---|
| | N | % | N | % | N | % | N | % | N | % |
| Dentist | 10 | 19% | 1 | 2% | 14 | 27% | 31 | 60% | 7 | 14% |
| Nurse Practitioner | 16 | 13% | 7 | 6% | 20 | 16% | 78 | 61% | 35 | 28% |
| Optometrist | 0 | 0% | 0 | 0% | 0 | 0% | 2 | 100% | 0 | 0% |
| Physician | 21 | 13% | 1 | 1% | 27 | 16% | 93 | 55% | 55 | 33% |
| Physician's Assistant | 12 | 20% | 0 | 0% | 9 | 15% | 39 | 65% | 17 | 28% |
| Podiatrist | 0 | 0% | 0 | 0% | 0 | 0% | 1 | 100% | 0 | 0% |
| Veterinarian | 9 | 29% | 0 | 0% | 4 | 13% | 11 | 36% | 14 | 45% |
| Total | 68 | 15% | 9 | 2% | 74 | 17% | 255 | 58% | 128 | 29% |

*Note:* This item analyzes data for the 441 respondents who answered that they do not have delegates. Differences by role were statistically significant for Other $\chi^2(6) = 12.53$, $p = 0.05$.

## Table 26a. Number of delegates, physicians (Q83)

| Role | 1-2 | | 3-5 | | 6-10 | | 11+ | |
|---|---|---|---|---|---|---|---|---|
| | N | % | N | % | N | % | N | % |
| Dentist | 2 | 100% | 0 | 0% | 0 | 0% | 0 | 0% |
| Nurse Practitioner | 11 | 58% | 8 | 42% | 0 | 0% | 0 | 0% |
| Optometrist | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| Physician | 31 | 63% | 14 | 29% | 3 | 6% | 1 | 2% |
| Physician's Assistant | 8 | 73% | 3 | 27% | 0 | 0% | 0 | 0% |
| Podiatrist | 1 | 100% | 0 | 0% | 0 | 0% | 0 | 0% |
| Veterinarian | 6 | 75% | 2 | 25% | 0 | 0% | 0 | 0% |
| Total | 59 | 66% | 27 | 30% | 3 | 3% | 1 | 1% |

*Note:* This item analyzes data for the 90 respondents who answered that they do have delegates. Statistical significance between roles was not assessed because of low sample size.

## Table 27a. Perceived helpfulness of delegates, physicians (Q85)

| Role | Extremely helpful | | Very helpful | | Somewhat helpful | | Not so helpful | | Not at all helpful | |
|---|---|---|---|---|---|---|---|---|---|---|
| | N | % | N | % | N | % | N | % | N | % |
| Dentist | 2 | 100% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| Nurse Practitioner | 11 | 58% | 4 | 21% | 2 | 11% | 2 | 11% | 0 | 0% |
| Optometrist | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| Physician | 24 | 49% | 15 | 31% | 6 | 12% | 3 | 6% | 1 | 2% |
| Physician's Assistant | 4 | 36% | 4 | 36% | 3 | 27% | 0 | 0% | 0 | 0% |
| Podiatrist | 0 | 0% | 1 | 100% | 0 | 0% | 0 | 0% | 0 | 0% |
| Veterinarian | 5 | 63% | 2 | 25% | 1 | 13% | 0 | 0% | 0 | 0% |
| Total | 46 | 51% | 26 | 29% | 12 | 13% | 5 | 6% | 1 | 1% |

### Table 22b. Interest and awareness in having delegates, pharmacists (Q23-24)

| | Are you aware of your options to use delegates | | Do you have any authorized delegates on your account | |
|---|---|---|---|---|
| | N | % | N | % |
| Yes | 56 | 74% | 10 | 13% |
| No | 20 | 26% | 66 | 87% |
| Total | 76 | 100% | 76 | 100% |

### Table 23b. Interest in having delegates, pharmacists (Q25)

| | N, % | |
|---|---|---|
| Yes | 12 | 19% |
| No | 53 | 82% |
| Total | 65 | 100% |

*Note:* This item analyzes data for the 66 respondents who reported that they do not have delegates.

### Table 24b. Reasons not to have delegates, pharmacists (Q26)

| | N, % | |
|---|---|---|
| Too much responsibility to share | 19 | 29% |
| Don't trust anyone on my staff | 7 | 11% |
| I don't understand how to allow them | 7 | 11% |
| I prefer to check on my own | 44 | 67% |
| Other | 15 | 23% |

*Note:* This item analyzes data for the 66 respondents who reported that they do not have delegates.

## ABOUT NPC RESEARCH

NPC Research provides quality social services evaluation, policy analysis, research, and training. We are dedicated to improving the effectiveness of human services offered to children, families, and communities.

For more information see **npcresearch.com**