Oregon Prescription Drug Monitoring Program

2013 Annual Report to the PDMP Advisory Commission

Oregon Health Authority
PUBLIC HEALTH DIVISION
Prescription Drug Monitoring Program

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Prescription Drug Monitoring Program

Center for Prevention and Health Promotion

Oregon Public Health Division

Oregon Health Authority

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Table of Contents

List of Figures 3

List of Tables 3

Executive Summary 4

Introduction 5

Operations 6

Basic Metrics 6

Pharmacy Reporting Compliance 6

Number of PDMP System Users 6

Utilization of PDMP System 8

Patient-Requested Reports 10

Outreach to Enroll Health Care Providers and Pharmacists 10

PDMP System Customizations 11

Program Objectives 12

PDMP Data 14

Evaluation 17

Discussion 19

Recommendations 20

List of Figures

Figure 1. PDMP system accounts by discipline 6
Figure 2. Number of PDMP accounts and total prescribers and pharmacists by discipline 7
Figure 3. Number of PDMP queries by discipline 8
Figure 4. Average monthly number of PDMP system queries per querying user by discipline 9
Figure 5. Number of patient-requested reports by recipient type 10
Figure 6. Percentage of total CS II-IV prescriptions written by most frequent prescribers 15
Figure 7. Rate of residents per 10,000 using four or more prescribers and pharmacies 16

List of Tables

Table 1. Program objectives, status and next steps 12
Table 2. Select controlled substances dispensed to residents 14
Table 3. Count of patients filling prescriptions from four or more prescribers and pharmacies .. 16

Executive Summary

In 2009, the Oregon Legislature passed Senate Bill 355 mandating that the Oregon Health Authority develop a Prescription Drug Monitoring Program (PDMP). The program became operational in September 2011. The PDMP is an electronic Web-based data system that collects information on Schedule II – IV controlled substances dispensed by Oregon-licensed retail pharmacies. The PDMP provides authenticated system users who can prescribe or dispense controlled substances 24-hour, seven-day-a-week access to information on controlled substances dispensed to their patients or customers. The intent of the PDMP is to help health care providers improve patient care and prevent some of the problems associated with controlled substances. Below operational findings are presented using 2013 data and PDMP data findings are presented using 2012 data.

Findings

By the end of 2013, almost 100 percent of pharmacies required to report data to the PDMP had uploaded information into the system, and 98 percent of reporting pharmacies regularly reported within the seven-day statutory limit.

As of December 31, 2013, more than 5,550 or 36 percent of approximately 15,400 health care providers who prescribed at least one controlled substance prescription in 2013 were authenticated users with active PDMP accounts (Figure 2).

In 2013, the number of queries by system users more than doubled in the second year of system operation (Figure 3); system users conducted on average 16 queries each month (Figure 4).

In 2013, eighty-two percent of patient-requested reports were sent directly to patients (Figure 5). Fewer patient-requested reports were sent to third-party providers as compared to 2012.

In 2012, approximately seven million prescriptions for Schedules II-IV controlled substances were dispensed by retail pharmacies to Oregonians; of these, 50 percent were for opioids. Benzodiazepines were the second-most-often prescribed class of medication.

Between January 1, 2012 and December 31, 2012, almost 183,000 Oregonians received prescriptions for both an opiate and a benzodiazepine (Table 2).

Over 60 percent of the prescriptions listed in the PDMP database were written by a cohort of 2,000 prescribers; 67 percent of these prescribers have active accounts (Figure 6).

Between July 1, 2013 and December 31, 2013, 4,269 patients filled prescriptions written by four or more providers and dispensed by four or more pharmacies; over 841,000 patients received at least one prescription (Table 3).

Provider Recommendations

Respondents to a PDMP provider survey conducted in April 2013 indicated that time constraints continue to be the primary barrier to system use and that training on how to respond to PDMP information would be helpful in clinical practice (Evaluation).

Introduction

This report serves to satisfy Oregon statute that requires the Oregon Health Authority to annually submit a report to the Advisory Commission regarding the Prescription Drug Monitoring Program (PDMP). This report contains information on the operation of the program including: basic program and system metrics, status on key operational objectives, and findings from various program evaluation activities. The overall goal of this report is to provide information to guide the operation of the PDMP program, assess PDMP utilization, answer questions about the impact of PDMP information on clinical practice and patient outcomes, and determine – if possible – what, if any, impacts the PDMP system might have on community health.

Operations

In 2013, the Oregon Prescription Drug Monitoring Program (PDMP) completed its second full year of operation. The program monitors metrics to evaluate and improve business processes. The operation of the system is guided by program objectives that establish priorities, time frames, and targets that guide staff activities. Copies of monthly, year-to-date and to-date business operation reports can be found at http://www.orpdmp.com/reports.html.

Basic Metrics

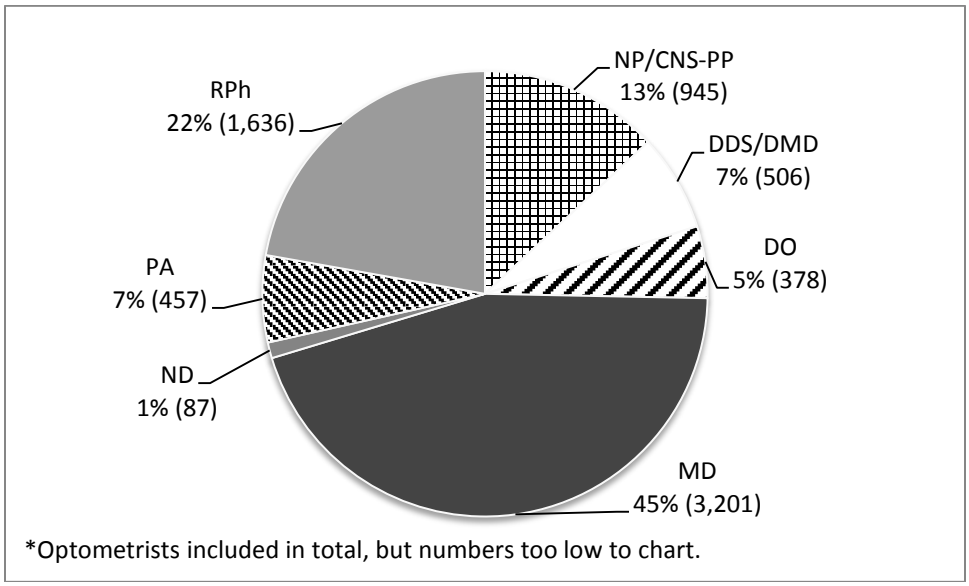
Pharmacy Reporting Compliance

Pharmacy participation increased steadily in 2013. Almost 100 percent of pharmacies required to report controlled substance information have uploaded data into the system (99.4 percent as of 12/31/13). This is an increase from 98 percent reporting compliance at the end of 2012. Compliance with seven-day reporting requirements increased from 95 percent at the beginning of 2013 to 98 percent by the end of the year. These numbers fluctuate throughout the year since new pharmacies begin providing services and come online and others with controlled substance licenses terminate business.

Number of PDMP System Users

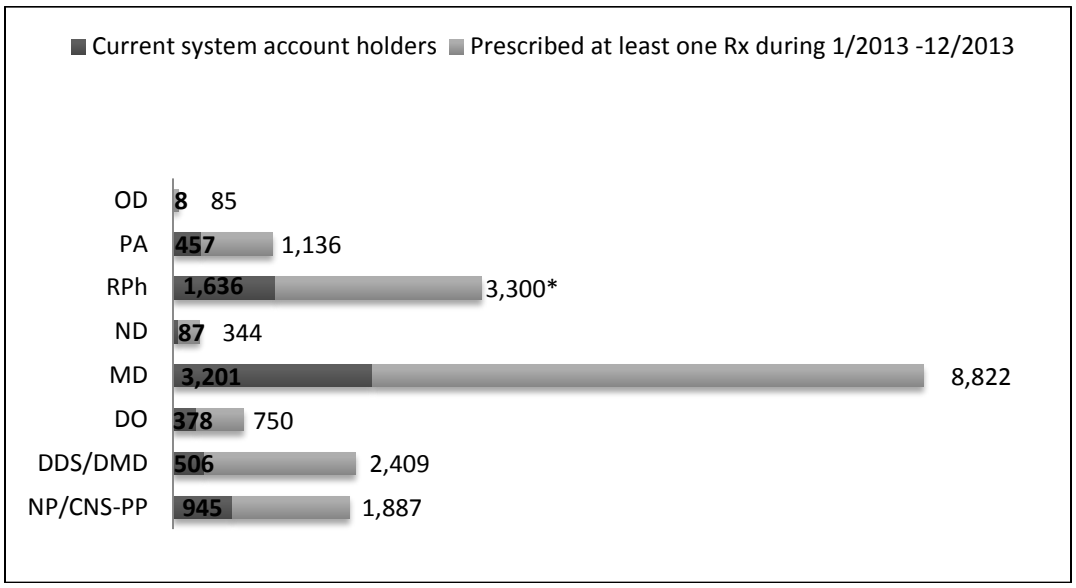
As of December 31, 2013, 7,218 (25 percent) authenticated system users of an estimated 29,000 licensed health care providers and pharmacists had active PDMP accounts. Physicians (MDs) comprised the highest number of health care providers with accounts with 3,201 (Figure 1).

Figure 1. PDMP system accounts by discipline, Oregon, Sept 2011 to December 2013, N=7,218



Thirty-six percent of those health care providers who prescribed at least one Schedule II, II, or IV controlled substance prescription during 2013 had an active PDMP account (Figure 2). Nurses and doctors of osteopathy had the highest percentage of account holders among those who prescribed at 50 percent, followed by physician assistants and medical doctors at 40 percent and 36 percent respectively. Fifty percent of an estimated 3,300 pharmacists who dispensed controlled substance prescriptions during 2013 had active PDMP accounts.

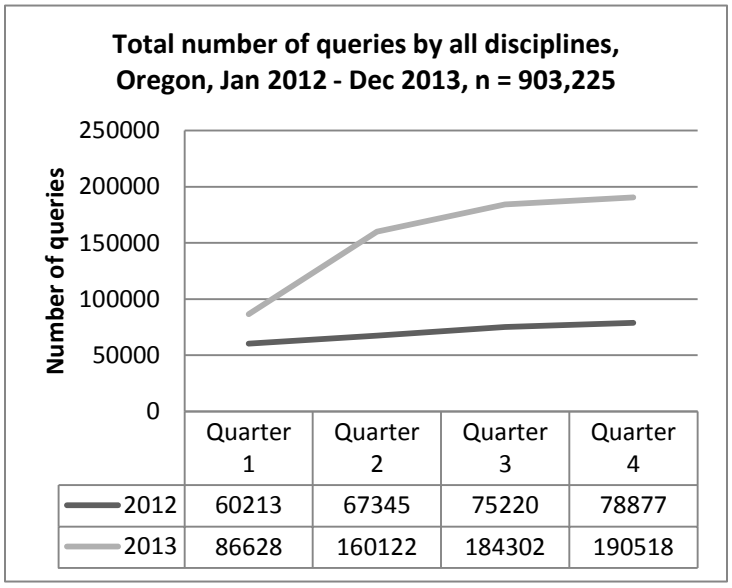
Figure 2. Number of PDMP accounts through 12/31/13 and total Oregon-licensed providers who prescribed and pharmacists who dispensed in 2013, by discipline, number with accounts = 7,218

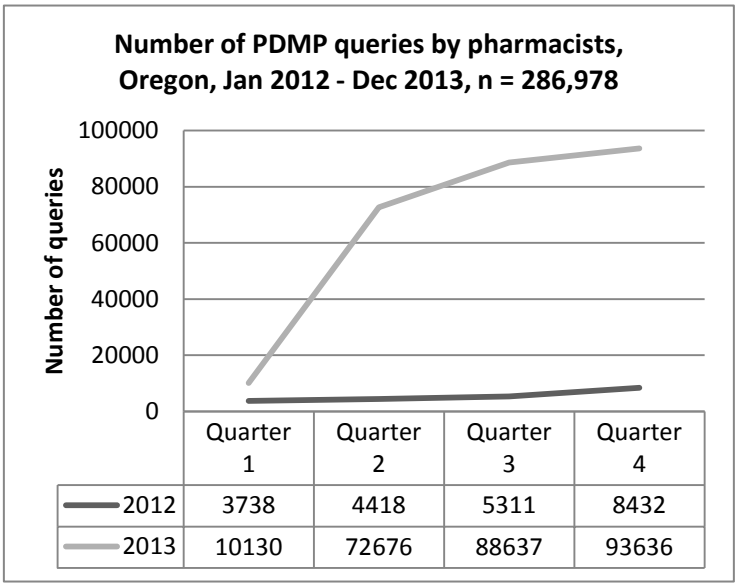


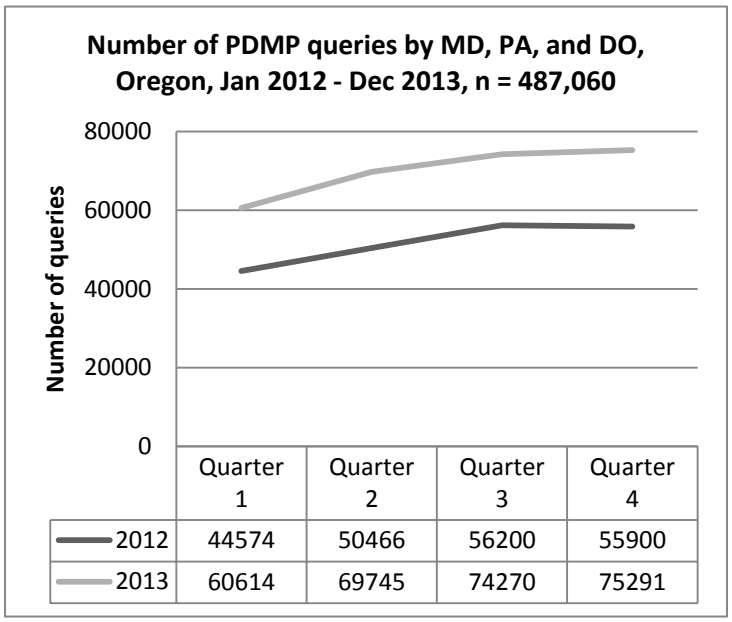
*Estimated number of Pharmacists with an RPh license who dispense medications.

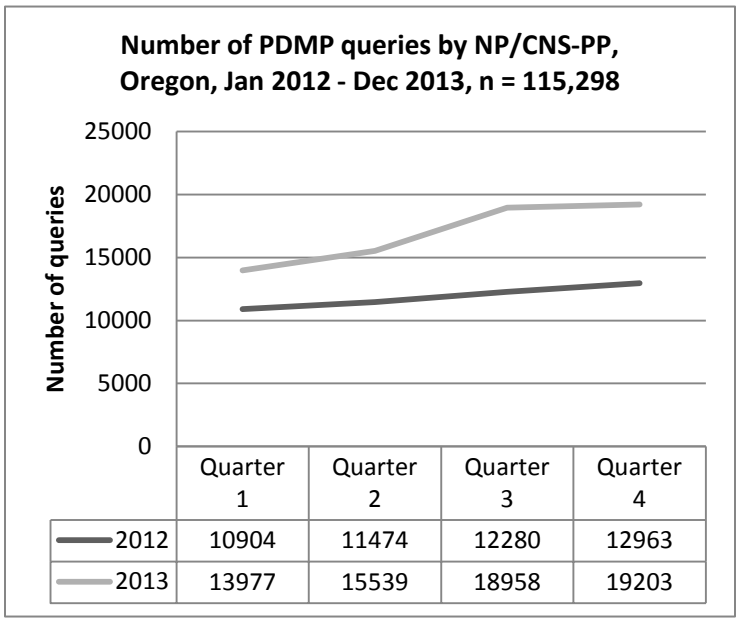
In 2013, health care providers and pharmacists conducted 621,570 system queries. The overall number of system queries more than doubled between Oct. – Dec. 2012 and Oct. – Dec. 2013 (78,877 compared to 190,518) (Figure 3).

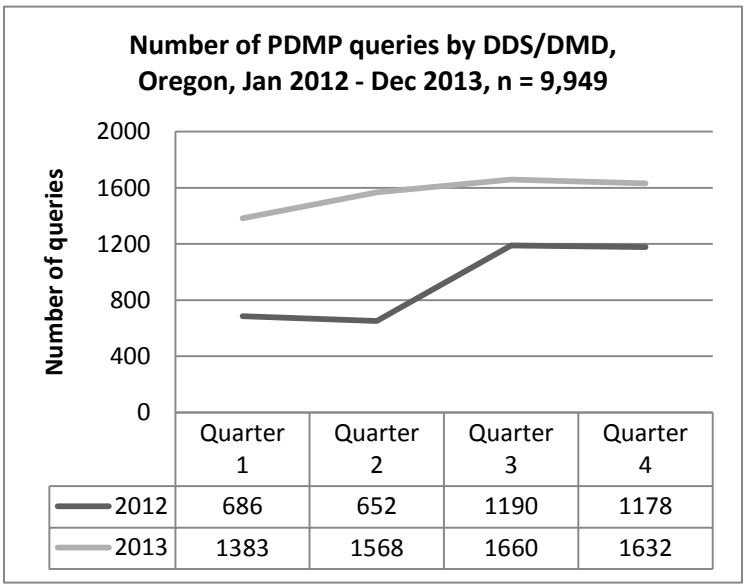
Figure 3. Number of PDMP queries by discipline, Oregon, Jan 2012 – Dec. 2013, N=903,225

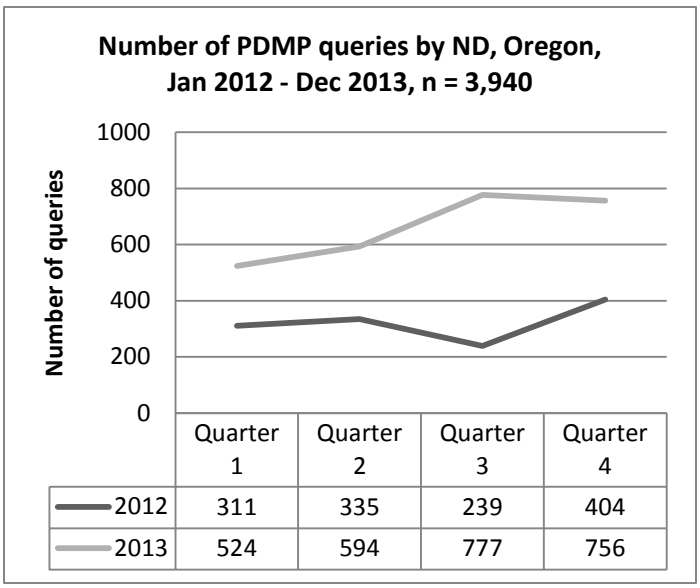






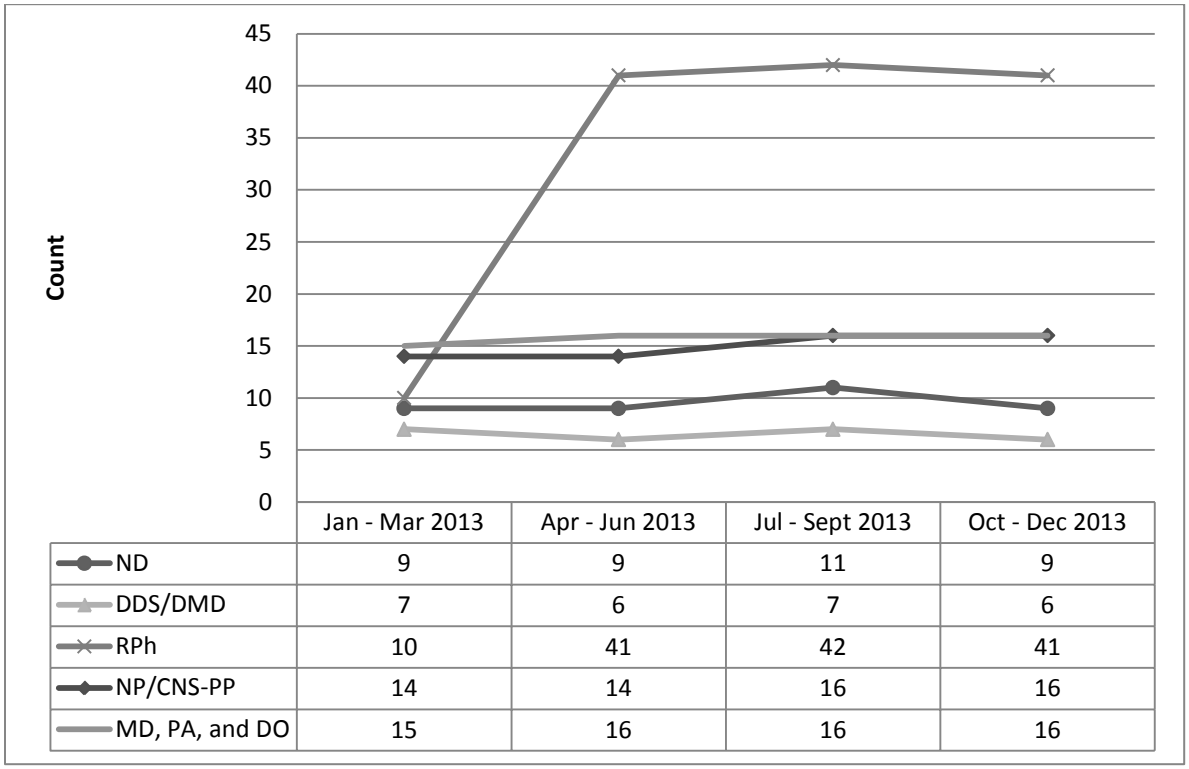






The average number of queries made each month by those using the system is illustrated in Figure 4. System users conducted on average 16 queries each month.

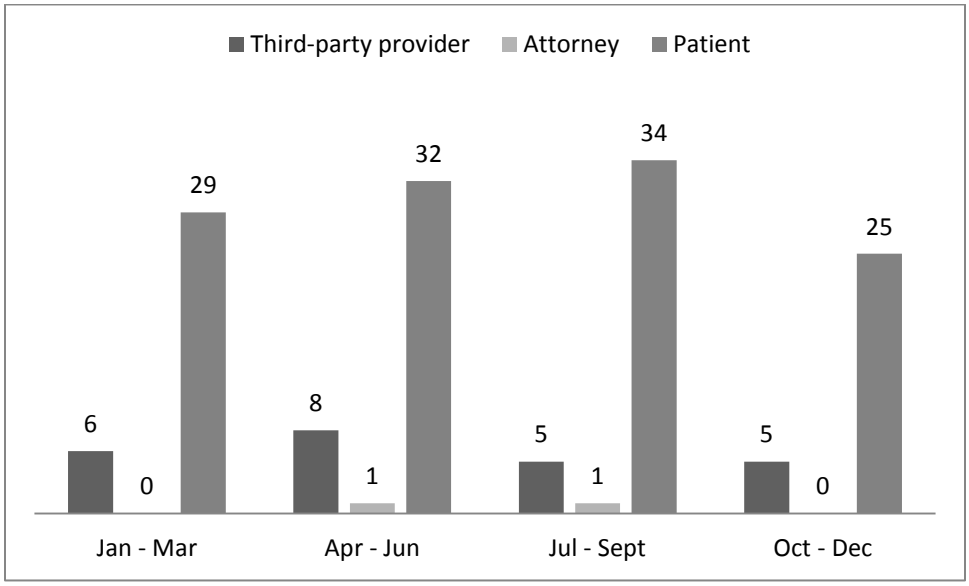
Figure 4. Average monthly number of PDMP system queries per querying user by discipline, Oregon, Jan. – Dec. 2013



Patient-Requested Reports

PDMP staff processed 146 patient report requests in 2013. Eighty-two percent of the reports were sent directly to patients while the remainder were sent upon patient request to third-party providers (17 percent) and attorneys (1 percent) (Figure 5).

Figure 5. Number of patient-requested reports by recipient type, Oregon, Jan. 2013 – Dec. 2013, N=146



Additionally, statute requires that the program respond to patient requests within ten business days of receipt of the request. In 2013, the program responded to requests within one day of receipt 74 percent of the time. The longest time for response was four days for a single request.

Outreach to Enroll Health Care Providers and Pharmacists

The program rehired three temporary outreach specialists to recruit and enroll system users using the remaining federal funds from a Bureau of Justice Assistance Harold Rogers PDMP grant. The outreach specialists worked from September 2012 through March 2013 to increase enrollment among the cohort of prescribers who write controlled substance prescriptions most often. Contacts included practitioners, pharmacists, clinic managers and other health care system administrators. By the end of the funding period, 62 percent of the providers who prescribed 60 percent of all the controlled substances in the databases were registered PDMP system users.

Throughout 2013, PDMP staff continued to conduct outreach through collaborations with state health care regulatory boards and local and statewide health care associations. Staff presented at health care conferences, seminars, and continuing education courses related to clinical prescribing practices, pain management, and substance abuse and behavioral health care treatment.

PDMP System Customizations

The PDMP has utilized a variety of ways to collect feedback from system users: a program email address and phone line, a technical Help Desk supported by the system vendor, temporary outreach specialists who have connected directly with health care providers, and system assessment surveys. The barrier most often cited by system users and potential system users regarding access and use of the PDMP system is a lack of time to conduct queries. Providers and pharmacists reported that use of the system would increase if they could delegate their system use authority to office staff, medical technicians, and nurses who are responsible for chart work and preparation for patient appointments.

Senate Bill 470 was introduced and passed during the 2013 Oregon legislative session that addresses this barrier and more. The bill authorized the following changes effective January 1, 2014:

- Permits the PDMP to collect additional data (patient sex, days supplied, and refill data)
- Permits prescribers and pharmacists to authorize delegate access to members of staff
- Permits prescribers to review prescriptions dispensed under their own DEA number to assess fraud and self-evaluate prescribing practices
- Allows the State Medical Examiner and designees to access PDMP information for autopsies and death investigations
- Authorizes prescribers in neighboring states (WA, ID, and CA) and who treat Oregonians to access the Oregon PDMP
- Allows public health authorities to use de-identified PDMP data
- Makes additional PDMP information exempt from public records disclosure

PDMP Administrative Rules (OAR 410-121-4005 through 410-121-4020) were revised and system and pharmacy reporting changes were implemented accordingly. The PDMP also implemented a new system interface for systems users to make the query process more user-friendly.

Program Objectives

Table 1. Program objectives, status and next steps, Oregon, 2013.

Objective 1 – 100 percent of pharmacies required to upload data into the PDMP submit reports.	
Measure	Monthly report from PDMP vendor Health Information Designs, LLC
Status	Ongoing – to date almost 100 percent have uploaded data
Next steps	PDMP staff will monitor compliance monthly, continue outreach, and facilitate work between the vendor and pharmacies to resolve technical issues.
Objective 2 – 100 percent of pharmacies submit data reports weekly.	
Measure	Monthly report from PDMP vendor Health Information Designs, LLC
Status	Ongoing – to date approximately 98 percent are reporting at least weekly
Next steps	PDMP staff will monitor compliance monthly and continue outreach – focus will be on resolving zero reporting issues.
Objective 3 – Process 100 percent of patient record requests within two days of receipt.	
Measure	Quarterly review of PDMP Patient Record Request Tracking Database
Status	Ongoing – In 2013, more than 92 percent were processed within two days.
Next steps	PDMP staff will conduct outreach with behavioral health care providers to work with their patients and utilize patient reports to aid in care.
Objective 4 – Increase the percent of registered prescribers who are among the cohort prescribing ~80% of the controlled substances from 59 percent in October 2013 to 80 percent by 2015.	
Measure	Quarterly report from PDMP data system
Status	Ongoing – 59 percent were signed up as of October 31, 2013
Next steps	Temporary outreach specialists will be utilized using federal grant funds to target top prescribers directly. Health systems and Coordinated Care Organizations (CCOs) will also be targeted to adopt PDMP use policies.
Objective 5 – Support the PDMP data work group.	
Measure	Number of meetings held
Status	Ongoing – The PDMP data work group met 9 times in 2013.
Next steps	The PDMP data group will identify hypotheses and study aims to explore overdose issues and identify potential funding opportunities for follow-up research.
Objective 6 – Develop and support a local health department (LHD) work group.	
Measure	Number of meetings held
Status	Ongoing – to be developed
Next steps	PDMP staff will work with the Opioid Prescribers Group in Jackson and Josephine counties to explore established practice guidelines and how to develop a statewide work group.
Objective 7 – Develop a toolkit that provides information on resources that help address the various issues associated with controlled substances.	
Measure	Toolkit deliverable with link on PDMP Website
Status	Completed – a copy of the controlled substance toolkit can be found at http://www.orpdmp.com/health-care-provider-resources.html
Next steps	PDMP staff will update and market the toolkit to appropriate stakeholder groups – CCOs, large health care systems, and LHDs will be targeted.
Objective 8 – Analyze data to examine acute and chronic pain prescribing.	
Measure	PDMP data report

Status	Ongoing – to be developed
Next steps	The PDMP data work group will analyze by 9/30/2014.

Objectives to be added in 2014

Objective 9 – Explore correlation between controlled substance dispensation and fatal and nonfatal overdose.	
Measure	Overdose report
Status	Ongoing – to be developed
Next steps	Link PDMP data with death and hospitalization data and analyze data to identify indicators and/or predictors of overdose.
Objective 10 – Develop Web-based interactive training modules for PDMP users.	
Measure	Number of training modules developed
Status	Ongoing – to be developed
Next steps	Work with the Opioid Prescribers Group in Jackson County to modify training modules developed and create additional training modules – e.g. a behavioral health care provider module.
Objective 11 – Conduct PDMP program evaluation at the clinical practice level to assess the impact of PDMP use in the health care setting to inform further development of the PDMP.	
Measure	Indicators of clinical practice change in patient health files
Status	Ongoing – to be developed
Next steps	Contract with Program Design and Evaluation Services (PDES) and a health system or clinic partner to conduct patient files reviews.
Objective 12 – Analyze prescribing patterns of top prescribers to develop at-risk overdose indicators and compare 2012 and 2013 PDMP data.	
Measure	Prescribing history reports
Status	Ongoing – to be developed
Next steps	Identify volunteer prescribers to share prescribing history reports for them to self-evaluate their prescribing practices.
Objective 13 – Market PDMP toolkit to appropriate stakeholder groups.	
Measure	Toolkit deliverable with link on PDMP Website
Status	Ongoing – to be developed
Next steps	Target CCOs, large health care systems, and LHDs.

PDMP Data

The PDMP produced the first annual statewide and county-level data reports for 2012 in November 2013 – see select data (Table 2). These reports describe the dispensing of the most-often prescribed controlled substances. The reports were distributed to local health officials. The reports can be used to inform, develop, implement, and analyze population-based prevention approaches to reduce prescription drug overdose, such as public information campaigns and clinical guidance. A copy of the statewide and county reports can be found at http://www.orpdmp.com/reports.html.

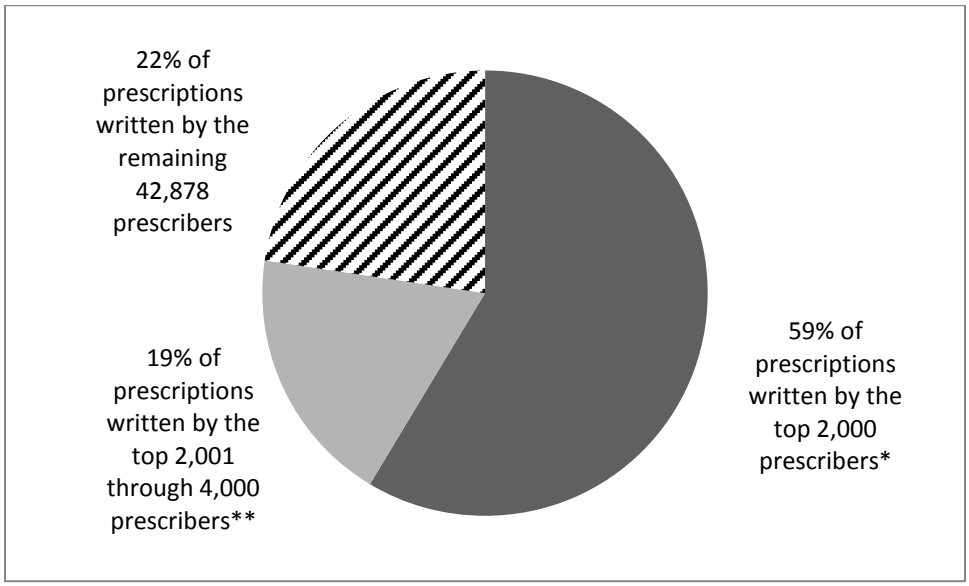
Table 2. Select controlled substances dispensed to residents, by number of recipients and Rx dispensed, by average number of Rx dispensed per recipient, and by rate per 1,000 of number of recipients and number of Rx dispensed, Oregon, 1/1/12 to 12/31/12

Controlled Substance	Prescription recipient count in 12 months	Number of prescriptions dispensed in 12 months	Number of prescriptions dispensed per prescription recipient in 12 months	Number of people receiving prescription, per 1,000 residents	Number of prescriptions dispensed per 1,000 residents
Opioids[1]	**908,162**	**3,495,888**	**3.8**	**233.8**	**900.1**
Hydrocodone	676,105	1,947,074	2.9	174.1	501.3
Oxycodone	334,805	1,122,642	3.4	86.2	289.1
Morphine	40,004	234,233	5.9	10.3	60.3
Hydromorphone	22,998	68,274	3.0	5.9	17.6
Methadone[2]	16,259	123,665	7.6	4.2	31.8
Fentanyl	14,941	88,331	5.9	3.8	22.7
Benzodiazepines[3]	**413,754**	**1,833,426**	**4.4**	**106.5**	**472.1**
Lorazepam	132,705	416,302	3.1	34.2	107.2
Zolpidem	123,824	530,485	4.3	31.9	136.6
Alprazolam	99,024	373,609	3.8	25.5	96.2
Diazepam	70,421	184,657	2.6	18.1	47.5
Clonazepam	63,783	328,373	5.1	16.4	84.6
Temazepam	15,836	69,202	4.4	4.1	17.8
Opioid-Benzo Combo[4]	**182,763**	**1,111,838**	**6.1**	**47.1**	**286.3**

[1]*Opioids include: Hydrocodone, Oxycodone, Morphine, Methadone, Fentanyl, and Hydromorphone.*
[2]*Does not include methadone used to treat addiction.*
[3]*Benzodiazepines include: Zolpidem, Lorazepam, Alprazolam, Clonazepam, Diazepam, and Temazepam.*
[4]*Opioids include all listed above. Benzodiazepines include all listed above except Zolpidem which represents a chemically different class of benzodiazepine, and in which the risk of combination with opioids is thought to be somewhat lower.*

Fifty-nine percent of the prescriptions listed in the PDMP database were written by a cohort of 2,000 prescribers; 67 percent of these prescribers had active accounts. Seventy-eight percent of the prescriptions listed in the database were written by a cohort of 4,000 prescribers; 59 percent of these prescribers had active accounts (Figure 6).

Figure 6. Percentage of total CS II-IV prescriptions written by most frequent prescriber cohort, Oregon, 1/1/13 to 12/31/13, n=46,878



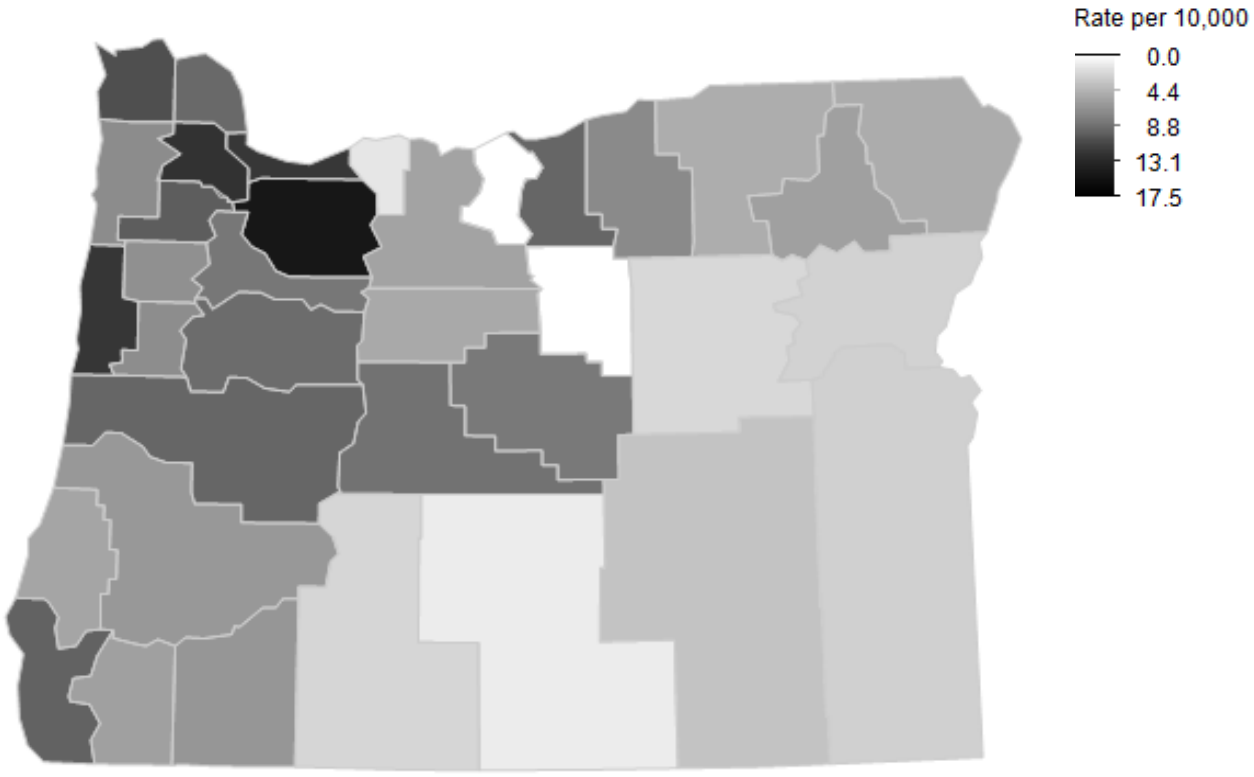
** Sixty-seven percent of these prescribers were authenticated system users as of 12/31/13.*
*** Fifty-nine percent of these prescribers were authenticated system users as of 12/31/13.*

Research suggests that patients who receive controlled substance prescriptions written by four or more prescribers and that are dispensed at four or more pharmacies over a 6-month period have increased potential for misuse of medications and increased risk for adverse outcomes, e.g. overdose[1, 2] (Table 3 and Figure 7).

Table 3. Count of patients filling prescriptions from four or more prescribers and four or more pharmacies, Oregon, 7/1/13 to 12/31/13

	Count of patients
4 or more providers and pharmacies	4,269
Total number of patients who received at least one prescription	841,876

Figure 7. Rate of residents per 10,000 using four or more prescribers and four or more pharmacies by county, OR, 7/1/13 to 12/31/13



[1] Peirce, G., M. Smith, et al. (2012). "Doctor and pharmacy shopping for controlled substances." Med Care.
[2] Katz, N., L. Panas, et al. (2010). "Usefulness of prescription monitoring programs for surveillance---analysis of Schedule II opioid prescription data in Massachusetts, 1996--2006." Pharmacoepidemiol Drug Safety 19: 115-123.

Evaluation

Statute requires evaluation of the PDMP system. Program evaluation provides information that helps guide the development and ongoing operations of the system, examines how the information may or may not guide clinical practice, generates information to inform policy decisions, and provides information to develop and target prevention efforts.

The PDMP is evaluated a number of ways: through monthly operational metrics, by the collaborative, multi-disciplined stakeholder data work group that provides statewide and county-level data reports, by contracted evaluation services, and through a five-year National Institutes of Health grant awarded to Acumentra Health and Oregon Health and Sciences University.

Health Care Provider Survey

Little is known about the clinical or demographic characteristics of clinicians who register for and use PDMPs or who choose not to register to use the system. Even less is known about how providers integrate PDMPs into clinical practice. In April 2013, Acumentra Health and Oregon Health and Sciences University conducted a PDMP provider survey in an attempt to address these gaps in the literature. The survey was designed to assess registered user and non-user characteristics, barriers to registration and use of the PDMP, system improvements and training opportunities identified by survey respondents, and how providers use the PDMP in practice.

The survey was sent to 3,300 providers with a DEA license in Oregon. Responses were received from 358 (59 percent) high users of the PDMP (i.e. those who conducted four or more queries over a three-month period), from 261 (52 percent) low users of the PDMP (i.e. those who conducted less than four queries over a three-month period), and from 439 (25 percent) non-users. The characteristics of the survey respondents mirrored those of the matched professional board registry population. The majority of respondents were physicians (57 percent) and in primary care practice (35 percent).

The survey found:

- Providers who had registered to use the PDMP were significantly younger than providers who were not registered, while gender, race, and ethnicity distributions were similar between the groups.
- Among non-user respondents, 66 percent cited lack of training on how to access or use the PDMP as a barrier, 64 percent cited time constraints as a barrier, and 47 percent were not aware of the program. Among system user respondents, time constraints were the most common barriers to using the PDMP, cited by 61 percent of high users and 78 percent of low users.
- Nearly all respondents registered as PDMP users (97 percent) said linking multiple state PDMP systems would increase the usefulness of the PDMP in clinical practice. Two-thirds (66 percent) of non-user respondents said training on access or use of the PDMP would be helpful. Among registered user respondents, 79 percent said training on how to respond to PDMP information would increase the usefulness of the PDMP in clinical

practice, while 70 percent said training on non-confrontational communication of findings to patients would be helpful.

- Among registered user respondents, 96 percent said they check the PDMP when they suspect diversion, addiction, or abuse. Only 4 percent of respondents reported checking the PDMP with every patient, but 22 percent of pain and addiction specialists who responded said they check the PDMP with every patient.
- Eighty-eight percent of respondents reported that, when patients were confronted about the results of a PDMP report, they at least sometimes respond with anger or denial; 73 percent reported that sometimes patients do not return; and 23 percent reported that sometimes patients request help for drug addiction or dependence.

Conclusions

Based on these survey results, the following conclusions can be made:

- Not all frequent prescribers use the PDMP; more effort is needed to increase adoption and ease use of the system.
- Provider and patient responses to PDMP data are not optimal; more research is needed to identify optimal approaches and to evaluate patient responses.
- Providers who currently use the PDMP do not perceive a need for training on how to use the system, but they need training on how to respond to the information.

Discussion

At the end of its second full year of operation, the Oregon Prescription Drug Monitoring Program has made significant progress increasing system utilization. In 2013, program efforts were focused on enrolling the top-prescribing health care providers. Of the 4,000 providers who prescribed 78 percent of the controlled substance prescriptions recorded in the system, 2,359 (59 percent) were enrolled. This effort will continue as a focus for the program, not only for increasing utilization of the system but also for evaluating its effect on clinical practice and patient care outcomes. Overall system use increased by more than 220 percent from 2012 to 2013. This increase is due largely to pharmacists' use of the system. Some chain pharmacies – namely Wal-Mart and Walgreens – required their pharmacists to obtain PDMP accounts and conduct queries when dispensing specified controlled substances. Health care clinics also worked to enroll groups of providers. Efforts will continue to engage clinics and health systems to facilitate PDMP use.

The number of patient-requested reports sent to third-party providers took a downturn in 2013. Twenty-four patient-requested reports were sent to third-party providers as compared to 55 in 2012. Behavioral health care providers are not able to access the PDMP, but they can work with their patients to obtain information that can impact their therapeutic approaches. Given that more than 8,800 patients were admitted into treatment for primary substance of abuse/dependency for opiates in 2012[3], this option could prove beneficial given increased utilization of patient reports as part of behavioral health care assessment.

Program and system evaluation continue to be useful for understanding and mitigating problems that health care providers experience with the system. Time constraints were cited as the most common barrier to accessing and using the PDMP by both system users and providers who are not system users. In 2014, authenticated system users will be allowed to delegate access to PDMP data to office medical staff to prepare information for a patient appointment. A new system interface will also be implemented to address user feedback and make the query process more user-friendly. This next year will show how these changes affect system use. The program will identify patient care and community health outcomes to monitor to realize the PDMP's full potential as a health care tool.

[3] SAMHSA – Treatment Episode Dataset, State of Oregon, 2012 http://oas.samhsa.gov/dasis.htm#teds2

Recommendations

Recommendations were developed from the information gathered from business operations, reports and evaluation efforts.

- Assure that the most frequent prescribers have system accounts.
- Engage health care systems to initiate PDMP use policies and develop use guidelines to better utilize PDMP data in health care practice.
- Explore how to better incorporate use of the PDMP into the clinical workflow.
- Engage local public health officials in efforts to increase use of prescribing guidelines and practice improvements, and promote system enrollment in their jurisdictions.
- Disseminate information about the PDMP system and helpful resources through licensing boards and health care provider associations.
- Produce and disseminate tools for system users and other stakeholder groups on how to use PDMP reports with patients – e.g., training modules.
- Engage behavioral health treatment providers to increase the use of patient reports in behavioral health treatment settings.
- Engage county substance abuse prevention specialists to disseminate public information.
- Continue evaluation activities aimed at measuring community health outcomes and impact on patient care.