

Prescription Drug Monitoring Program Center of Excellence at Brandeis

Using PDMP Data to Guide Interventions with Possible At-Risk Prescribers

October 2014

This project was supported by Grant No. 2011-PM-BX-K002 awarded by the Bureau of Justice Assistance. The Bureau of Justice Assistance is a component of the Office of Justice Programs, which also includes the Bureau of Justice Statistics, the National Institute of Justice, the Office of Juvenile Justice and Delinquency Prevention, the Office for Victims of Crime, and the Office of Sex Offender Sentencing, Monitoring, Apprehending, Registering, and Tracking. Points of view or opinions in this document are those of the author and do not necessarily represent the official position or policies of the U.S. Department of Justice.



Table of Contents

The Role of PDMPs in Identifying Possible At-Risk Prescribers ----- 3

State Initiatives for Possible At-Risk Prescribers----- 4

Arizona: Prescriber report cards----- 4

Tennessee: Letters to high volume prescribers and reports to licensing boards----- 5

Kentucky: Reports to investigators on possible at-risk providers ----- 5

Texas: Reports to licensing boards and law enforcement ----- 6

New Jersey: Pro-active reporting on possible risky prescribing and dispensing----- 7

Massachusetts: Outreach to prescribers with high proportions of doctor shoppers ----- 7

New York: Identifying and contacting at-risk prescribers ----- 7

Conclusion ----- 8

Acknowledgements----- 8

Appendix A: Arizona PDMP Prescriber Report Card ----- 9

Using PDMP Data to Guide Interventions with Possible At-Risk Prescribers

The prescription drug abuse epidemic is driven in part by a minority of prescribers who over-prescribe or mis-prescribe controlled substances, especially opioids and benzodiazepines. In this report we will refer to prescribers who deviate from accepted standards of practice or whose prescribing is unusual or uncharacteristic for their specialty as *at-risk* prescribers. Identifying and intervening where appropriate with at-risk prescribers is a key strategy in efforts to control prescription drug misuse and diversion. The CDC has recently recommended focusing efforts on prescribers not following accepted medical practice.¹

The Role of PDMPs in Identifying Possible At-Risk Prescribers

Because they collect comprehensive dispensing data, PDMPs are uniquely positioned to help identify prescribers at risk of over-prescribing or prescribing inappropriately. The top prescribers in a state as ranked by frequency of prescribing or dosage units prescribed often account for a high proportion of the total amount of dispensed controlled substances. For example, in the first three quarters of 2012 the top 8% of prescribers in Oregon accounted for 79% of all prescriptions for Schedule II - IV drugs.² In Florida in 2012, the top 10% of prescribers (top decile) were responsible for over 60% of opioid prescriptions.³ While high frequency or dosage are not themselves indicators of inappropriate prescribing, it is one reason to consider further analysis and review by the PDMP or a licensing board. PDMP data analyses can readily identify the top 10% or 20% of prescribers for all controlled substances or for particular classes or combinations of drugs that are most involved in misuse or diversion.

Other criteria identifiable in PDMP data for possible problematic prescribing include having a high proportion of possible doctor shoppers in a practice, patients coming from long distances, and a high proportion of dispensed prescriptions paid for in cash.⁴ When combined with data on prescriber license activity and specialty, analyses can also identify those prescribers who exceed the norm for their licensed profession, specialty, and standards of practice. Having identified possible at-risk prescribers with the help of the PDMP, professional licensing agencies and boards tasked with maintaining medical standards can intervene as appropriate, taking into

¹ The CDC writes that efforts to reduce the epidemic should include focus on “prescribers who clearly deviate from accepted medical practice in terms of prescription painkiller dosage, numbers of prescriptions for controlled substances, and proportion of doctor shoppers among their patients.” CDC, Policy Impact: Prescription Painkiller Overdoses, at <http://www.cdc.gov/homeandrecreationalsafety/rxbrief/>.

² See Prescription Drug Dispensing in Oregon, October 1, 2011 – March 31, 2012, Figure 1, p. 30, http://www.orpdmp.com/orpdmpfiles/PDF_Files/Reports/Statewide_10.01.11_to_03.31.12.pdf.

³ Data from the Prescription Behavior Surveillance System (PBSS) as presented by Dr. Len Paulozzi at the 2013 Harold Rogers PDMP National Meeting, see <http://www.pdmpassist.org/pdf/PPTs/National2013/26-8-A%20Paulozzi.pdf> slide 21.

⁴ For a description of PDMP measures indicative of possible at-risk prescribing, see Definitions of Prescription Behavior Surveillance System (PBSS) Measures, Section 5: Pill Mill Measures, pp. 4-7, <http://www.pdmpexcellence.org/sites/all/pdfs/Definitions%20of%20PBSS%20Measures%20112113.docx>

Interventions with Possible At-Risk Providers

account all the evidence that bears on a case.⁵ PDMPs may also be able to refer to law enforcement those prescribers potentially involved in illegal activities, including diversion of controlled substances.

PDMP data analyses can be used to track changes in prescribing by those who have been subjects of agencies' actions, thereby helping to assess the effectiveness of interventions.⁶ Below are descriptions of initiatives undertaken or planned in Arizona, Tennessee, Kentucky, Texas, New Jersey, Massachusetts and New York. These can serve as models for other states to emulate or modify in their efforts to reduce prescription drug abuse and diversion. Some programs, for instance the Arizona report card, are directed at all prescribers who exceed norms for prescribing in a particular geographical area, while others such as Kentucky's are geared toward specific prescribers who are confirmed to be contravening good medical practice.⁷ In Texas and New Jersey, data on both prescribers and dispensers are reviewed.

State Initiatives for Possible At-Risk Prescribers

Arizona: Prescriber report cards. In a pilot program planned for state-wide adoption, the Arizona PDMP conducts analyses to identify 'outlier prescribers', defined as those one standard deviation above the average for their specialty and county in prescribing commonly abused controlled substances, whether in numbers of prescriptions or total dosage units. Outlier prescribers are sent "report cards" that summarize in graphical format the prescriber's prescribing as compared to local averages for the past year (see Appendix A for a sample report card). Report cards were sent to over 1,000 prescribers in Yavapai, Pinal, Graham and Greenlee counties. Outcomes thus far are promising. In Pinal county after one year, the percentage of prescribers meeting the outlier criterion for total dosage units fell from 19.2 percent to 14.2 percent, a 26% decline, while the number of prescriptions for all controlled substances fell by over 5%.⁸ These findings suggest that report cards alert prescribers that they are prescribing well above practice norms, leading them to re-examine their prescribing policies.

The report cards may also serve to increase prescriber awareness and participation in the Arizona PDMP. In the four pilot program counties, 39% of prescribers were enrolled in the PDMP as of June 2014, compared to 26% for the state, and enrollment in the PDMP for these counties increased 111% from June 2012 to June 2014, compared to an increase of 72% for the state. In Pinal County, prescriber use of the PDMP increased 14% after the first year of the pilot.⁸ Research studies and surveys of prescribers indicate that they change their prescribing

⁵ It is important in what follows to distinguish between *possible* at-risk prescribers and those actually confirmed to be prescribing outside standards of practice.

⁶ The CDC has recently called for increased use of PDMP data for surveillance of possible excessive prescribing and for evaluation of initiatives to change prescriber behavior, see http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6326a2.htm?s_cid=mm6326a2_w.

⁷ In general, PDMP data are only indicators, not proof, that a prescriber is engaging in medically unwarranted prescribing.

⁸ Data courtesy of the Arizona PDMP.

Interventions with Possible At-Risk Providers

behavior in response to viewing PDMP data, which may account for some of the decline in prescribing observed following the report cards.⁹

It should be noted that the report card initiative is only one facet of the pilot program carried out in these counties, so changes in prescribing and PDMP participation may be the result of factors in addition to the report cards themselves, such as prescriber trainings, community education, and media coverage of the problem. As part of its [Prescription Drug Reduction Initiative](#), Arizona is seeking to expand the program, including prescriber report cards, to the entire state.

Tennessee: Letters to top prescribers and reports to licensing boards. In 2013, the Tennessee legislature adopted a requirement that, using the PDMP, the Tennessee Department of Health (TDH) identify and notify at least annually the top fifty prescribers in the past calendar year.¹⁰ The notification letters include information about the practitioner's level of prescribing and ask the prescribers or their medical supervisors to justify the amounts prescribed as medically necessary, on pain of disciplinary action for non-compliance. Letters are not sent if the prescriber is a subject of an active investigation. TDH then determines, in consultation with medical experts on appropriate prescribing, whether the prescriber's explanation is justified, taking into account factors such as medical specialty and ages of patients. If the explanation leaves concerns about over-prescribing unaddressed, the prescriber or medical supervisor is given 15 days to produce additional supporting evidence that the level of prescribing is medically warranted. If concerns about excess prescribing still remain, TDH may contact the relevant licensing board for its review of the case, which may trigger an investigation should inappropriate prescribing seem likely. As of this report no data were available on numbers of prescribers contacted thus far or other outcomes of the letter initiative.¹¹

In addition to the letter initiative, the Tennessee PDMP currently provides data to licensing board investigators on the most frequent prescribers, both for numbers of prescriptions and total dosage units of certain controlled substances. The PDMP is in the process of incorporating refinements to these criteria, such as data on how a provider's prescribing compares to norms for a particular specialty (e.g., general medicine or orthopedics) and how practices vary in the types and dosages of prescribed controlled substances. The PDMP has added staff with analytical and epidemiological expertise to develop these measures using PDMP data. As of this report, no data were available yet with respect to outcomes related to this initiative.

Kentucky: Reports to investigators on possible at-risk prescribers. As part of recent efforts in Kentucky to more effectively address prescription drug abuse, Kentucky's PDMP—the Kentucky All Schedule Prescription Electronic Reporting system (KASPER)—sends PDMP reports on prescribers to investigators at the Drug Enforcement and Professional Practices

⁹ See the [COE Briefing on PDMP Effectiveness](#) for studies and surveys on the impact of viewing PDMP data on prescribing.

¹⁰ The relevant text of the legislation can be found at <http://state.tn.us/sos/acts/108/pub/pc0396.pdf>, pages 2-3.

¹¹ See <http://www.psychsearch.net/tn-withholds-doctors-names/> and <http://www.timesfreepress.com/news/2012/apr/18/tenncare-blocks-top-drug-prescribers/?news> for news stories about an initiative by Iowa Senator Charles Grassley to identify the top ten prescribers billing to Medicaid in states. Some of those identified in Tennessee using TennCare (Medicaid) data have been barred from billing Medicaid because their prescribing was judged medically unwarranted.

Interventions with Possible At-Risk Providers

Branch (DEPPB) of the Office of the Inspector General. Investigators then evaluate the reports to see if further inquiry into potentially inappropriate or illegal prescribing is warranted. Prescribers selected by KASPER for review and possible referral to DEPPB are identified using criteria recommended by the Governor's KASPER Advisory Council. Prior reviews included the top two percent of prescribers issuing prescriptions for oxycodone, hydrocodone, oxymorphone, methadone, alprazolam, and drug "cocktails" (e.g., hydrocodone, alprazolam, carisoprodol). Once the DEPPB receives a report from KASPER, investigators, who are registered pharmacists as well as certified peace officers in Kentucky, review the provider's prescribing history. The review includes types of controlled substances prescribed, prescribing unusually large quantities and/or medically questionable combinations, issuing new prescriptions before all refills are exhausted, and having patients who travel long distances. Investigators also take into account the practitioner's specialty, and, in consultation with licensure boards, any record of disciplinary action or known problems with the practitioner. If the review indicates a substantial likelihood of problematic prescribing, the information is forwarded to the appropriate board for further investigation. If criminal activity is suspected, cases are sent to law enforcement investigators.

From July 2012 (the start of this initiative) to November 2013, DEPPB had received 95 cases for review, and completed reviews of 76. Of these, 46 (60 %) were determined to meet criteria for referral to the Kentucky Board of Medical Licensure (KBML) or law enforcement. KBML took action in 23 (50 %) of the cases referred to it.¹² Actions thus far have resulted in retirements, agreed orders setting out sanctions and terms to be imposed upon the prescriber, and controlled substance license revocations. Thus, some problematic prescribers have modified their practices or have been removed from the system. The KASPER Advisory Council is now considering criteria for reviews of dentists prescribing large quantities of benzodiazepines, hydrocodone and oxycodone, high volume prescribing of Schedule II stimulants, and pharmacies dispensing high volumes of hydrocodone, oxycodone and Schedule II stimulants.

Texas: Reports to licensing boards and law enforcement. The Texas PDMP conducts frequent analyses of its database to detect possible problematic prescribing and dispensing that can be brought to the attention of appropriate authorities. Automated algorithms generate reports on providers meeting pre-defined criteria suggestive of at-risk practice, such as being among the most frequent prescribers or dispensers of widely abused controlled substances. Prescription data are reviewed to help rule out legitimate reasons for what seems to be problematic prescribing or dispensing, as well as to scan for indicators warranting further data analyses. When a provider is identified as reportable to law enforcement, staff decides whether to refer the case to investigators within the Department of Public Safety (home to the PDMP) or to another law enforcement agency—federal, state, county, or local. Investigators receive a complete prescription history report; in some cases, copies of prescriptions are included. Cases on medical providers not deemed appropriate for law enforcement investigation are referred to

¹² Data from DEPPB provided courtesy of KASPER.

Interventions with Possible At-Risk Providers

licensing boards. Care is taken to coordinate with other agencies in order not to compromise investigations already underway (de-confliction) and to supply PDMP data relevant to those investigations. The Texas PDMP has produced an average of 20-25 prescription drug cases a month for law enforcement investigation, making it among the most active PDMPs for this type of intervention.¹³

New Jersey: Proactive reporting on risky prescribing and dispensing. The New Jersey PDMP conducts quarterly analyses to look for concerning patterns of prescribing and dispensing, such as identifying the state's top prescribers and pharmacies for controlled substances commonly encountered in cases of illegal prescribing. Database searches are conducted using drug therapeutic codes, dosage types (e.g., 30 mg Roxycodone) and payment type. If suspicious departures from normal prescribing practice are detected, the appropriate law enforcement agency or licensing board, depending on the level and type of activity, is contacted. Recent analyses related to possible diversion have focused on top prescribers of oxycodone where payments for prescriptions are made in cash. The PDMP also runs ad hoc analyses to further explore patterns identified in quarterly reviews or to investigate developments reported to the PDMP by other agencies. For example, law enforcement agencies may report that promethazine with codeine syrup is turning up on the street, so analyses are run for promethazine.¹³

Massachusetts: Outreach to prescribers with high proportions of possible doctor shoppers. In an initiative aimed at increasing awareness and utilization of its PDMP, Massachusetts analyzed its data to identify "high risk" prescribers, defined as those with relatively high proportions of possible doctor shoppers in their practices (i.e., patients meeting thresholds for numbers of prescribers and pharmacies in a six month period). Those high risk prescribers not enrolled in the PDMP were notified via letter about their status and encouraged to enroll. The initiative resulted in 150 notifications in 2012, and as of 2013 over 40% of the notified prescribers had enrolled in the PDMP. In a separate study of the top 50 high risk prescribers, those enrolled in the PDMP (n=12) had a 26 percent decline from 2010 to 2011 in the number of patients meeting criteria for doctor shopping, compared to a 7.5 percent decline for those not enrolled in the PDMP (n=38).¹⁴ In a future initiative, Massachusetts plans to engage identified high risk prescribers via academic detailing – one-on-one provider education aimed at improving opioid prescribing.

New York: Identifying and contacting at-risk prescribers. In an initiative under consideration, New York PDMP data will be analyzed to identify at-risk prescribers, defined as those who frequently prescribe opioids in combination with benzodiazepines and/or prescribe high volume and high doses of opioids. These prescribers will receive a mailing from the New York State

¹³ The text in this section has been adapted from the COE guidance document on unsolicited reporting at http://www.pdmpexcellence.org/sites/all/pdfs/Brandeis_COE_Guidance_on_Unsolicited_Reporting_final.pdf.

¹⁴ These findings should be interpreted with caution since there may be bias in favor of more proactive scrutiny and modification of prescribing practices for those voluntarily enrolling in the PDMP. The initiative and study are described in a presentation by Leonard Young for the 2013 National Rx Abuse Summit; see <http://www.slideshare.net/OPUNITE/new-focuses-forpdmpseffortfinal>, slides 58-9.

Interventions with Possible At-Risk Providers

Department of Health indicating concern about potentially harmful prescribing practices. The mailing will also provide corresponding educational materials focused on risks and benefits of long-term opioid use and risks of combining opioids with other central nervous system depressants. Outcomes of the intervention will be measured by comparing pre-intervention prescribing history to post-intervention prescribing using PDMP data.

Conclusion

The initiatives summarized above illustrate some options states may wish to pursue in addressing a primary source of controlled substances implicated in the prescription drug abuse epidemic: practitioners who prescribe, intentionally or not, in excess of or otherwise inconsistent with good medical practice. PDMPs are critical tools in this effort, in their capacity to (1) identify prescribers who may be intentionally or unintentionally prescribing outside the standards of practice; and (2) track prescribing behavior longitudinally for assessing the effectiveness of interventions aimed at prescribing reform. As these initiatives continue, more data will become available to permit their evaluation and enhancement.

It should be noted that the initiatives described above are by no means exhaustive of those underway in states with active PDMPs. Future updates to this briefing will cover additional interventions and provide new information on their outcomes as measured by PDMP data, data on licensing board and law enforcement actions, and health indicators affected by controlled substance prescribing.

Acknowledgements: The COE gratefully acknowledges the expertise and editorial assistance of those PDMP staff consulted in the preparation of this report, including:

Dean Wright, Arizona

Dave Hopkins, Kentucky

Leonard Young, Massachusetts

Eric Rosen, New Jersey

Andrew Holt, Tennessee

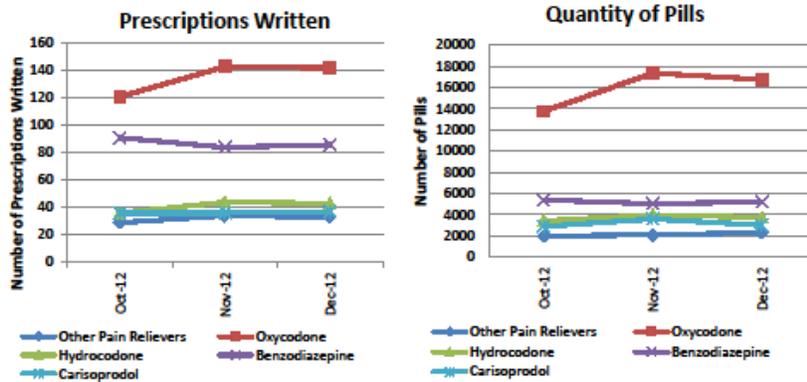
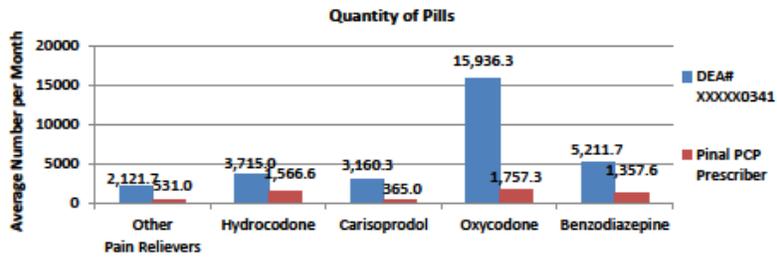
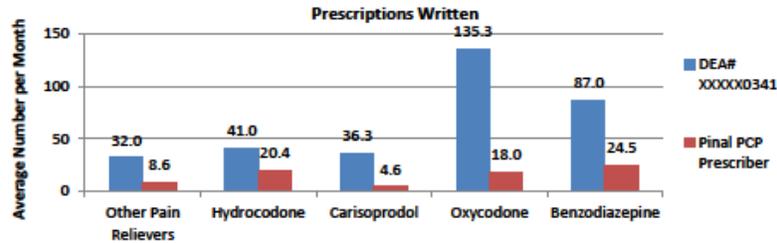
Sherry Wright, Texas

Appendix A Arizona Prescriber Report Card*

PRESCRIBER: DEA# XXXXX0341

A continuing review of the Prescription Drug Monitoring Program (PDMP) from 10/2012 through 12/2012 reveals the following about your prescribing habits: You have been identified as an outlier* with respect to the number of prescriptions written and the quantity of pills prescribed for Hydrocodone, Oxycodone, Other Pain Relievers, Carisoprodol and Benzodiazepine.

*Above average prescribing for your prescriber type in your county



You are currently signed up for access to the Prescription Drug Monitoring Program (PDMP) http://www.azpharmacy.gov/CS-Rx_Monitoring/practioner_procedures.asp
For additional information please contact the Arizona State Board of Pharmacy (602) 771-2744

*From slide 17 in the presentation available at http://www.azcjc.gov/ACJC.Web/Rx/Presentations/RxInitiative_general.pptx