2014-2015
Prescription Drug Monitoring Program
Annual Report
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Message from the State Surgeon General and Secretary of Health

It gives me great pleasure to present Florida’s 2014-2015 PDMP Annual Report. The PDMP exemplifies the Department’s mission to protect, promote and improve the health of all people in Florida through integrated state, county and community efforts. This year the PDMP has helped Florida achieve remarkable health successes.

Florida’s PDMP, E-FORCSE®, has proven to be an effective tool to protect public health and safety, while supporting sound clinical prescribing, dispensing, and use of controlled substances. Information maintained in Prescription Drug Monitoring System (PDMS) can help identify sources of prescription drug diversion such as prescription fraud, forgeries, and improper prescribing and dispensing. Evidence continues to validate Florida’s PDMP as effective in improving clinical decision-making, reducing multiple provider episodes, preventing diversion of controlled substances and assisting in other efforts to curb the prescription drug abuse epidemic. The usefulness of Florida’s PDMP is reflected in a significant increase in registration and utilization and reduction of morphine equivalent dosing by prescribers.

Today, there are over 163 million controlled substance prescription dispensing records maintained in the PDMS. In the first four years of operation, physicians and dispensers made more than 21 million requests to view their specific patients’ controlled substance dispensing history. This year, law enforcement has requested and received more than 6,509 investigative reports from E-FORCSE staff to assist in active criminal investigations involving controlled substances.

While promising progress has been made, we have more work to do for elimination of prescription drug abuse and misuse in our great state.

John H. Armstrong, MD, FACS
Surgeon General & Secretary
Executive Summary

As required by section 893.055(8), Florida Statutes, the 2014-2015 Prescription Drug Monitoring Program (PDMP) Annual Report highlights this year’s accomplishments in achieving the following outcomes: reduction of the rate of inappropriate use of prescription drugs through Department of Health (DOH) education and safety efforts; reduction of the quantity of pharmaceutical controlled substances obtained by individuals attempting to engage in fraud and deceit; increased coordination among interested parties participating in the PDMP; and involvement of stakeholders in achieving improved patient health care and safety and reduction of prescription drug diversion.

Report Highlights

Pharmacy Reporting Compliance –

On average, each month 5,585 pharmacy dispensers report controlled substance prescription information into the system, and 96 percent of pharmacies complied with the mandated seven-day statutory limit for reporting. Of those dispensers, 65 percent reported information within 24 hours.

Increase in Prescriber Enrollment and Utilization –

E-FORCSE staff provided outreach and education to 150 stakeholders, 73,911 health care practitioners, and 3,002 law enforcement and investigative agency personnel. As a result, during the last year, there has been a 16.9 percent increase in health care practitioner registration and a 99.3 percent increase in the number of requests for Patient Advisory Reports (PARs). In addition to attending association meetings to increase PDMP awareness, the Florida PDMP Foundation, Inc. and PDMP, in cooperation with the Florida Medical Association are in the final stages of development of a 1.5 hour CME course promoting registration and utilization of E-FORCSE to health care practitioners.

Impact on Prescriber Behavior –

Identifying at-risk patients is a crucial first step toward improving patient safety and increasing prescriber awareness. In an effort to assist prescribers and dispensers to identify at-risk patients, E-FORCSE implemented an enhancement to the PAR in January 2015, to include the morphine equivalent dosing (MED) for each opioid prescription dispensed to the patient. It also provides a MED Summary section at the bottom of the report, which displays the cumulative MED values and the cumulative MED sustained for any 3 consecutive days during the date range requested. There has been a 34.2 percent reduction in the average morphine milligram equivalents (MMEs) prescribed between October 2011 and September 2015.

Impact on Patient Behavior –

Through monitoring and analysis of multiple provider episodes (MPE), an increase in health care practitioner utilization, proactive notification to prescribers and law enforcement, Florida has seen a 65 percent reduction in the number of individuals having multiple provider episodes.
Impact on Patient Outcomes –

Opioid deaths overall increased from 2003 to 2010, but declined between 2011 and 2014. The *Drugs Identified in Deceased Persons by Florida Medical Examiners 2014 Annual Report*¹ shows occurrences of oxycodone decreased by 7.1 percent and deaths caused by oxycodone decreased by 12.0 percent from 534 to 470 when compared with 2013. The Medical Examiners also reported a decline in occurrences and deaths associated with methadone and hydrocodone. A 2015 study by Delcher et al. found that utilization of the PDMP has played a role in reducing oxycodone-related deaths in Florida.²

Between 2010 and 2012, Florida saw more than a 50 percent decrease in oxycodone overdose deaths due to the regulation of pain clinics and the elimination of dispensing controlled substances from health care practitioners’ offices. According to the Centers for Disease Control and Prevention these changes may represent the first documented substantial decline in drug overdose mortality in any state during the past ten years.³ Occurrences of oxycodone have continued to decrease over the past five years (a 59 percent decrease from 2010). Oxycodone caused deaths have also continued to decrease over the past five years (a 69 percent decrease when compared with 2010)⁴.

Looking Forward

All states, except Missouri, have enacted laws and implemented prescription monitoring programs to serve as an integral part of patient and public safety solutions addressing the national prescription drug epidemic.⁵ Looking forward, it is apparent that policy will play an important role in the utilization and sustainability of these programs.

States are considering policy changes that address reporting more frequently, authorizing designees for health care professionals, mandating registration and use, sending proactive alerts, integrating data into the clinical work flow, and long-term funding.⁶
Introduction

Background - The Prescription Drug Abuse Epidemic

Addiction overdoses and deaths involving non-medical prescription drug use, especially narcotic pain relievers, have risen dramatically over the last decade. In 2009, one in eight deaths in Florida was attributable to a prescription drug overdose. In 2010, 90 of the nation’s top 100 oxycodone purchasers were Florida physicians. In 2011, the Governor signed the most comprehensive legislation effecting distribution, prescribing and dispensing of controlled substances in Florida’s history. Between 2010 and 2012, Florida saw more than a 50 percent decrease in oxycodone overdose deaths due to the regulation of pain clinics and the elimination of controlled substance dispensing from health care practitioners’ offices. These changes may represent the first documented substantial decline in drug overdose mortality in any state during the past ten years.

Current Situation

This report will show that Florida experienced a steady rise in oxycodone-caused death rates since 2005 and peaked in 2010 (8.0 per 100,000). In the subsequent four years, the rate decreased to 2.4 per 100,000 (2014), the lowest since 2006 (Figure 11). Recent declines in overdose deaths may be attributed to safer, more effective pain management, changes in state regulatory policies, and promotion of the use of the information maintained in the PDMP. “While Florida has been viewed as the epicenter of the nation’s ‘pill mill’ epidemic, new statistics reflect that the efforts of the Drug Enforcement Administration (DEA) and its federal, state, and local law enforcement partners have made a significant difference in Florida.” The PDMP, in combination with changes in regulation, has proven effective at reducing opioid use by 500,000 hydrocodone-acetaminophen 5mg tablets per month.

As oxycodone caused deaths continue to decline, deaths associated with heroin use have sharply risen since 2010. There has been an increase in the number of incidences (124.6 percent) and deaths (111.4 percent) associated with heroin use when compared to 2013. Although available literature indicates that abuse of prescription opioids is a risk factor for future heroin use, only a small fraction, roughly 4 percent of opioid abusers, transition to heroin use within five years of initiating opioid abuse.
Legal Framework

Summary of Statute

Section 893.055, Florida Statutes, creates the PDMP within DOH and requires DOH to design and establish a comprehensive electronic database system to collect controlled substance prescription dispensing information, while not infringing upon the legitimate prescribing or dispensing of controlled substances by a prescriber or dispenser acting in good faith and in the course of professional practice. Below Table 1 summarizes PDMP and emergency treatment of opioid antagonist legislation passed from 2009 through 2015.

Table 1. History of legislation by year and bill number.

<table>
<thead>
<tr>
<th>Year</th>
<th>Bill Number</th>
<th>Summary of Changes</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009</td>
<td>SB462</td>
<td>Created section 893.055, F.S., establishing the PDMP.</td>
</tr>
<tr>
<td></td>
<td>SB440</td>
<td>Created section 893.0551, F.S., exempting information contained in the PDMP from public records requirements.</td>
</tr>
<tr>
<td>2010</td>
<td>SB2772</td>
<td>Amended sections 893.055 and 893.0551, F.S., establishing a definition for “program manager,” and requiring the program manager to work with certain stakeholders to promulgate rules setting forth indicators of controlled substance abuse. It also authorized the program manager to provide relevant information to law enforcement under certain circumstances.</td>
</tr>
<tr>
<td>2011</td>
<td>HB7095</td>
<td>Amended section 893.055, F.S., reassigning the duties of the Governor’s Office of Drug Control to DOH; to require reports be made to the PDMP within seven days of dispensing rather than 15 days; to prohibit the use of certain funds to implement the PDMP; and to require criminal background screening for all PDMP staff who have direct access to the PDMP.</td>
</tr>
<tr>
<td>2013</td>
<td>HB1159</td>
<td>Appropriated $500,000 of nonrecurring general revenue funds for the general administration of the PDMP for fiscal year 2013-2014.</td>
</tr>
<tr>
<td>2014</td>
<td>HB7177</td>
<td>Amended sections 893.055 and 893.0551, F.S., renewing the public record exemption and requiring law enforcement and investigative agencies to enter into a user agreement with DOH. In addition, it limits the information shared with a criminal justice agency and requires the disclosing person or entity take steps to ensure the continued confidentiality of the information, redacting any non-relevant information at a minimum. Finally, any information related to a criminal case shared with a state attorney may only be released in response to a discovery demand and any unrelated information requires a court order to be released.</td>
</tr>
<tr>
<td>2015</td>
<td>SB2500A</td>
<td>Appropriated $500,000 of general revenue funds for the general administration of the PDMP for fiscal year 2015-2016.</td>
</tr>
<tr>
<td>2015</td>
<td>HB751</td>
<td>Created section 381.887, F.S., establishing the Emergency Treatment and Recovery Act, authorizing certain health care practitioners to prescribe and dispense an emergency opioid antagonist to a patient or caregiver under certain conditions; authorizes storage, possession, and administration by a patient or caregiver and certain emergency responders; provides immunity from liability; and provides immunity from professional sanction or disciplinary action.</td>
</tr>
</tbody>
</table>

Florida PDMP Funding

With the exception of two general revenue appropriations by the legislature of $500,000 for FY 2013-14 and FY2015-16, no state funds support the PDMP. Through the innovation of DOH in leveraging federal grant money and also funds raised by the Florida PDMP Foundation, Inc., the PDMP has sustainable funding through FY2018-2019. To date the Foundation has provided $1,010,513 to fund E-FORCSE and its fundraising efforts are ongoing. In addition, DOH applied
for and was awarded six federal grants totaling $2,339,346. Since its inception in 2010, the PDMP has spent $2,805,086 for PDMS infrastructure and enhancements, personnel, and facility expenses.

**Projects Funded by Grants**

The PDMP has relied greatly on grant funding to offset system enhancement costs to the PDMS. DOH has been awarded six federal grants to implement and enhance the PDMP. Each grant funds specific projects outlined in the grant application and below is a summary of current projects. DOH remains committed to exploring innovative options for identifying projects and securing funds for the PDMP, and stands ready to work alongside our stakeholders and partners to ensure the future of the program.

**Harold Rogers PDMP Enhancement Grant 2012-PM-BX-0007 - $399,300**

Grant funds for this award are being used to improve the privacy, security and appropriate use of PDMP data; develop training materials and provide outreach and education to law enforcement agencies; and implement a proactive reporting program to identify abuse and diversion. The grant period ends December 31, 2015.

**Substance Abuse and Mental Health Services Administration PDMP EHR Integration and Interoperability 2012 - $240,105**

Grant funds for this award are being used to expedite health care practitioner access to information; improve data quality; and enhance the law enforcement module to allow the upload of supplementary information. The grant period ends September 30, 2016.

**Harold Rogers Data Driven Multi-Disciplinary Approach to Reducing Prescription Drug Abuse Grant 2013-PM-BX-0010 - $399,950**

Grant funds for this award are being used to establish and strengthen a long-term collaboration between the PDMP, law enforcement, public health and research community in Florida; collect and analyze data by centralizing existing data sources and completing practitioner surveys and a focus group; increase the engagement of Florida’s public health community in PDMP use via early participation in technical design and development of practitioner metrics; work with interested parties and stakeholders to develop educational opportunities and brochures to educate health care practitioners regarding legitimate and appropriate use of controlled substances; and develop valid data-driven analytic strategies; including enhancement of annual reporting with population-level prescribing trends. The project period ends September 30, 2016.

**Harold Rogers PDMP Enhancement Grant 2015-PM-BX-0009- $499,991**

Grant funds for this award are being used to enhance existing proactive reporting efforts to practitioners and law enforcement and analysis of the impact on prescriber behavior and law enforcement efforts; develop algorithms with the SAS Institute to further automate proactive notifications; and advocate for legitimate and appropriate use of controlled substances while not interfering with physician prescribing practices. The project period ends March 31, 2017.
Performance Measures

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 the PDMP information on clinical practice and patient outcomes, and if possible determine what impacts the PDMS may have on community health.

Technical Notes

The current report covers the period October 1, 2014 (Q4 2014) to September 30, 2015 (Q1-Q3 2015). This period is referred to as the current report year (RY). Direct year-to-year comparisons in the report are based on report years. Trend analyses are based on calendar year (CY).

Drug classifications for maps and figures are:

Opioids: Buprenorphine, Butorphanol, Codeine, Dezocine, Dihydrocodeine, Fentanyl, Fentanyl LA, Fentanyl SA, Hydrocodone LA, Hydrocodone SA, Hydromorphone, Meperidine, Methadone, Morphine LA, Morphine SA, Nalbuphine, Opiate Agonists, Oxycodone LA, Oxycodone SA, Oxymorphone LA, Oxymorphone SA, Pentazocine, Tapentadol, Tramadol, Tramadol LA and Tramadol SA and Other Opioids.

Stimulants: Amphetamine, Benzphetamine, Desoxyephedrine, Dexamphetamine, Dextroamphetamine Lisdexamfetamine, Methylphenidate and Other Stimulants.

Benzodiazepines: Alprazolam, Chlordiazepoxide, Clonazepam, Clorazepate, Diazepam, Estazolam, Flurazepam, Lorazepam, Oxazepam, Temazepam, Triazolam and Other Benzodiazepines.

In order to maintain consistency in the reported numbers from year-to-year, analytic datasets for each reporting period were created and archived for future reference. Discrepancies in counts provided in previous reports when compared to counts from the analytic dataset from the same period are minimal (<1 percent) and do not significantly affect interpretation.

Outcomes

To assist in fulfilling program responsibilities, DOH has identified and is reporting outcomes related to its efforts to reduce the rate of inappropriate use of prescription drugs through education and safety efforts; reduce the quantities of pharmaceutical controlled substances obtained by individuals attempting to engage in fraud and deceit; and to increase coordination among partners and stakeholders to achieve improved patient health care and safety and reduce prescription drug abuse and drug diversion.

1. OUTCOME: Reduction of the rate of inappropriate use of prescription drugs through DOH education and safety efforts.

   A. PERFORMANCE MEASURE: The number of licensed prescribers, dispensers, and authorized law enforcement officers trained in the use of the state’s Prescription Drug Monitoring System (PDMS).
There has been an increase in outreach among partners such as health care professional associations, law enforcement, regulatory boards and other agencies. E-FORCSE staff have provided outreach and education to 150 stakeholders, 73,911 health care practitioners, and 3,002 law enforcement agencies and investigative agencies (Table 2). As a result of the increased education and outreach among health care practitioners, registration increased 16.9 percent (Table 3).

**Health Care Practitioner Training and Outreach**

In January 2015, in order to improve the user experience, the PDMP implemented a redesigned user interface. In anticipation of the redesign, new training materials were developed to assist user transition to the new interface, including an updated training guide, video tutorials and quick reference guides. These training materials were disseminated via email to all system users. As a result of the notification, there was a 180 percent increase in the number of individuals who visited www.e-forcse.com (Table 2) and an increase in registration and utilization.

E-FORCSE staff collaborated with the Florida PDMP Foundation, Inc. and the Florida Medical Association to develop a 1.5 hour CME course promoting E-FORCSE to health care practitioners. The online course is expected to be made available in early 2016. It is anticipated that the course will be marketed to those practitioners who are not currently using the PDMS as part of their practice management protocols. Course material includes an overview on legal and legislative issues, PDMS operations, user benefits, regulatory board support and PDMP funding.

Increased outreach and educational efforts to health care practitioners has also included formal and informal training (e.g. attendance at a continuing education conference or exhibition at a statewide association meeting) on the registration and PAR request processes. In an effort to promote utilization, the PDMP has provided numerous journal articles to associations for publication, as well as performance measures in its Quarterly Dashboard published online.1

**Law Enforcement Training and Outreach**

Authorized users from law enforcement agencies received formal and informal training on the proper use of the confidential and exempt controlled substance prescription information requested and received from E-FORCSE staff. In order to improve the privacy and security of controlled substance prescription information in the PDMS, E-FORCSE implemented a new law enforcement module, in January 2015, requiring law enforcement agencies to enter into a user agreement with DOH prior to requesting information, and meet certain reporting requirements.

E-FORCSE staff developed training materials and provided formal in-person training sessions to 135 agency administrators regarding new program requirements. An additional 43 agency administrators attended the training via webinar. Furthermore, E-FORCSE staff collaborated with the Bureau of Professional Development within the Florida Department of Law Enforcement to create a one hour online training program on Information Privacy and Security related to information obtained from E-FORCSE during the course of an active investigation regarding prescribed controlled substances. Law enforcement personnel who complete this training earn credits toward their Criminal Justice Standards and Training Commissions mandate for officer

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re-certification requirements. So far, 399 law enforcement personnel have viewed the webinar at https://www.fdl.state.fl.us/Content/getdoc/54058cbd-7b19-4062-a8bb-c660278b0815/Mandatory-Retraining.aspx.

E-FORCSE staff also began development and implementation of its proactive reporting program for law enforcement. E-FORCSE staff developed and provided formal one-on-one training to 17 agency administrators, which explained the proactive report program.

Table 2. The number of individuals trained in the use of Florida’s PDMP, by reporting period.

<table>
<thead>
<tr>
<th>Individuals Trained to Use E-FORCSE</th>
<th>RY2014 (No.)</th>
<th>RY2015 (No.)</th>
<th>Change (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Licensed prescribers in the state17</td>
<td>112,442</td>
<td>124,933</td>
<td>11.1</td>
</tr>
<tr>
<td>Licensed prescribers formally and informally trained in the use of E-FORCSE</td>
<td>14,029</td>
<td>46,942</td>
<td>234.6</td>
</tr>
<tr>
<td>Licensed pharmacists in the state18</td>
<td>28,749</td>
<td>30,093</td>
<td>4.7</td>
</tr>
<tr>
<td>Licensed pharmacists formally and informally trained to use E-FORCSE</td>
<td>8,282</td>
<td>26,969</td>
<td>225.6</td>
</tr>
<tr>
<td>Certified Law Enforcement Officers19</td>
<td>49,769</td>
<td>49,952</td>
<td>0.4</td>
</tr>
<tr>
<td>Individuals authorized to conduct investigations formally and informally trained20 to request &amp; receive information</td>
<td>2,677</td>
<td>3,401</td>
<td>12.1</td>
</tr>
<tr>
<td>Individuals visited website <a href="http://www.e-forcse.com">www.e-forcse.com</a></td>
<td>59,159</td>
<td>165,676</td>
<td>180.1</td>
</tr>
</tbody>
</table>

B. PERFORMANCE MEASURE: The number of authorized users registered to use the PDMS.

The number of health care practitioners registered to use the PDMS has increased 16.9 percent, from 27,41221 to 32,054. Amid all health care practitioners, pharmacists have the highest registration rate, 51.4 percent. Among all prescribers, osteopathic physicians have the highest registration rate, 29.2 percent followed by physician assistants at 18.4 percent (Table 3). Overall, 20.7 percent of all licensed health care practitioners as defined in section 893.055(1)(d), Florida Statutes, have registered to use the PDMS.

Table 3. Percentage of health care practitioners registered to use the PDMS compared to total number of licensees by license type.

<table>
<thead>
<tr>
<th>License Type</th>
<th>Total Licensees (No.)</th>
<th>Registered Users (No.)</th>
<th>Registered (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARNP</td>
<td>20,944</td>
<td>1,822</td>
<td>8.7</td>
</tr>
<tr>
<td>DN</td>
<td>13,130</td>
<td>776</td>
<td>5.9</td>
</tr>
<tr>
<td>ME</td>
<td>70,558</td>
<td>10,206</td>
<td>14.5</td>
</tr>
<tr>
<td>OPC</td>
<td>3,167</td>
<td>8</td>
<td>0.3</td>
</tr>
<tr>
<td>OS</td>
<td>7,687</td>
<td>2,242</td>
<td>29.2</td>
</tr>
<tr>
<td>PA</td>
<td>7,613</td>
<td>1,397</td>
<td>18.4</td>
</tr>
<tr>
<td>PO</td>
<td>1,834</td>
<td>136</td>
<td>7.4</td>
</tr>
<tr>
<td>PS</td>
<td>30,093</td>
<td>15,467</td>
<td>51.4</td>
</tr>
<tr>
<td>TOTAL</td>
<td>155,026</td>
<td>32,054</td>
<td>20.7</td>
</tr>
</tbody>
</table>

Key: ARNP- Advanced Registered Nurse Practitioner; DN- Dentist; ME- Medical Doctor; OPC- Certified Optometrist; OS- Osteopathic Physician; PA- Physician Assistant; PO- Podiatric Physician; PS- Pharmacist
Certain law enforcement and investigative agencies may request controlled substance prescription information from the program manager during the course of an active investigation related to prescribed controlled substances. During the reporting period, E-FORCSE staff have trained and approved 512 law enforcement and investigative agency users (Table 4).

Table 4. Number of indirect authorized users by agency type.

<table>
<thead>
<tr>
<th>Agency</th>
<th>Authorized Users (No.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Law Enforcement</td>
<td>502</td>
</tr>
<tr>
<td>Attorney General's Medicaid Fraud Control Unit</td>
<td>8</td>
</tr>
<tr>
<td>Department of Health Regulatory Board</td>
<td>2</td>
</tr>
<tr>
<td>Total</td>
<td>512</td>
</tr>
</tbody>
</table>

C. PERFORMANCE MEASURE: The number of prescribers that issued one or more controlled substances and number of prescribers registered with E-FORCSE.

According to Brandeis University PDMP Center of Excellence (COE), data collected from multiple states have demonstrated that the number of prescribers who actually issue one or more controlled substance prescriptions is significantly less than the number registered with the DEA (or licensed to prescribe controlled substances). For example, several PDMPs have found that only about two-thirds of DEA-registered prescribers issue controlled substance prescriptions in a year. In light of this information, COE developed a PDMP Management Tool, which recommends calculating the number of in-state prescribers with PDMP accounts as a percentage of the number of in-state prescribers who issued controlled substance prescriptions during the prior year.

Figure 1 reports the percentage of Florida prescribers registered with E-FORCSE who issued one or more controlled substances per year. As of September 2015, 16,587 prescribers were registered with E-FORCSE while a total of 64,129 prescribers issued one or more controlled substances in the current reporting period. The percentage increased from 14.4 in report year of 2012 to 25.9 in the current reporting period.

Figure 1. Practitioners who issued one or more controlled substance prescriptions and prescribers registered with E-FORCSE in Florida, by year.
D. PERFORMANCE MEASURE: The number of dispensers reporting to the PDMS within seven days of dispensing a controlled substance.

Dispensers who dispense controlled substances listed in schedules II, III, or IV, as defined in section 893.03, Florida Statutes, are required to report to E-FORCSE within seven days each time a controlled substance is dispensed to an individual, unless it is one of the acts of dispensing or administering that are exempt from reporting under subsection 893.055(5), Florida Statutes.

There has been a 7.2 percent increase, from 6,288 to 6,741, in the number of dispensers reporting controlled substance dispensing information to E-FORCSE since the last reporting period. Although dispensers are required to report controlled substance dispensing information to the PDMS within seven days of dispensing, 65 percent of pharmacies are reporting within 24 hours.

2. OUTCOME: Reduction of the quantity of pharmaceutical controlled substances obtained by individuals.

A. PERFORMANCE MEASURE: The number of prescriptions of controlled substances dispensed to patients in various schedules.

There has been an 11.6 percent increase in the number of unique individuals receiving controlled substances in Florida from 6,594,101 to 7,359,995 (Table 7). A portion of this increase may be attributed to the 106,671 unique veterans who received a controlled substance prescription between October 1, 2014 and September 30, 2015. The Veteran’s Administration began reporting to E-FORCSE on October 1, 2014.

During the reporting period, the DEA rescheduled hydrocodone combination products from a schedule III to schedule II in October 2014. In addition, tramadol was classified as schedule IV, August 2014. The effects on the number of unique individuals receiving controlled substances due to the rescheduling of hydrocodone combination products from schedule III to schedule II and tramadol to schedule IV during this reporting period is reflected in Table 5.

Table 5 illustrates a 139 percent increase in unique individuals receiving schedule II controlled substances from 1,116,707 to 2,669,271. Corresponding with a 77.4 percent decrease in unique individuals receiving schedule III controlled substances from 1,864,748 to 422,111. Unique Florida residents receiving schedule IV controlled substances have increased 35.5 percent from 1,788,021 to 2,423,117. Likewise, there has been an increase, 209.5 percent, 436,383 to 1,350,498 unique Florida residents receiving schedule II and IV controlled substances.

On average, when drugs on a single schedule are prescribed, the average number of prescriptions per person is lower (range: 2.6-3.8) when compared to individuals prescribed drugs in multiple schedules (range: 6.5-17.2).
Table 5. The number of unique Florida residents and average number of prescriptions per person by controlled substance schedule.

<table>
<thead>
<tr>
<th>Schedule</th>
<th>RY2014 (No.)</th>
<th>RY2015 (No.)</th>
<th>Change (%)</th>
<th>RY2014 Rx per person</th>
<th>RY2015 Rx per person</th>
</tr>
</thead>
<tbody>
<tr>
<td>Schedule II</td>
<td>1,116,707</td>
<td>2,669,271</td>
<td>139</td>
<td>3.3</td>
<td>2.6</td>
</tr>
<tr>
<td>Schedule II and III</td>
<td>297,958</td>
<td>132,855</td>
<td>-55.4</td>
<td>6.2</td>
<td>6.5</td>
</tr>
<tr>
<td>Schedule II, III, and IV</td>
<td>333,941</td>
<td>182,827</td>
<td>-45.3</td>
<td>17.6</td>
<td>17.2</td>
</tr>
<tr>
<td>Schedule II and IV</td>
<td>436,383</td>
<td>1,350,498</td>
<td>209.5</td>
<td>11.5</td>
<td>10.0</td>
</tr>
<tr>
<td>Schedule III</td>
<td>1,864,748</td>
<td>422,111</td>
<td>-77.4</td>
<td>2.1</td>
<td>2.7</td>
</tr>
<tr>
<td>Schedule III and IV</td>
<td>697,458</td>
<td>158,419</td>
<td>-77.3</td>
<td>9.1</td>
<td>8.8</td>
</tr>
<tr>
<td>Schedule IV</td>
<td>1,788,021</td>
<td>2,423,117</td>
<td>35.5</td>
<td>4.2</td>
<td>3.8</td>
</tr>
<tr>
<td>Other</td>
<td>58,885</td>
<td>20,897</td>
<td>-64.5</td>
<td>1.9</td>
<td>5.2</td>
</tr>
<tr>
<td>Total</td>
<td>6,594,101</td>
<td>7,359,995</td>
<td>11.6</td>
<td>5.2</td>
<td>5.0</td>
</tr>
</tbody>
</table>

B. PERFORMANCE MEASURE: The number of unique patients, prescribers, and pharmacies in the PDMS.

Table 6 describes the characteristics of the PDMS. There are 7,806,564 unique patients who have received one or more controlled substance prescriptions during this reporting period, an 11.4 percent increase. In addition, the number of unique prescribers has declined 2.6 percent from 217,781 to 212,083. The mean number of unique patients per prescriber continues to increase from RY2012 to RY2015, and there is a 14.2 percent increase between RY2014 and RY2015. It is important to note that 446,569 unique out-of-state patients received one or more controlled substances during this reporting and period and prescriptions were dispensed under 148,197 out-of-state prescribers.

Table 6. Number of unique patients, prescribers and pharmacies in the PDMS, RY2012 to RY2015.

<table>
<thead>
<tr>
<th></th>
<th>RY2012</th>
<th>Change (%)</th>
<th>RY2013</th>
<th>Change (%)</th>
<th>RY2014</th>
<th>Change (%)</th>
<th>RY2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of unique patients</td>
<td>6,675,850</td>
<td>0.1</td>
<td>6,683,097</td>
<td>4.9</td>
<td>7,008,694</td>
<td>11.4</td>
<td>7,806,564</td>
</tr>
<tr>
<td>Number of unique prescribers</td>
<td>226,061</td>
<td>-4.0</td>
<td>217,120</td>
<td>0.3</td>
<td>217,781</td>
<td>-2.6</td>
<td>212,083</td>
</tr>
<tr>
<td>Number of Unique Pharmacies</td>
<td>6,181</td>
<td>-1.5</td>
<td>6,090</td>
<td>3.5</td>
<td>6,301</td>
<td>1.9</td>
<td>6,423</td>
</tr>
<tr>
<td>Mean number of unique patients per prescriber</td>
<td>45.7</td>
<td>3.3</td>
<td>47</td>
<td>3.4</td>
<td>49</td>
<td>14.2</td>
<td>55.7</td>
</tr>
</tbody>
</table>

Table 7 illustrates that during the last reporting period, 62,238 in-state prescribers issued 34,331,384 controlled substance prescriptions to Florida residents or approximately 551.6 prescriptions per prescriber. In the current reporting period, 63,886 in-state prescribers issued 36,491,586 prescriptions to Florida residents or approximately 571.2 prescriptions per prescriber. In this reporting period, approximately 5.0 prescriptions were filled per patient compared to 5.2 in the last reporting period, 4.8 percent reduction.
Table 7. Number of controlled substance prescriptions per patient, prescriber and per capita: Florida residents, RY2012 to RY2015.

<table>
<thead>
<tr>
<th></th>
<th>RY2012</th>
<th>Change (%)</th>
<th>RY2013</th>
<th>Change (%)</th>
<th>RY2014</th>
<th>Change (%)</th>
<th>RY2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Prescriptions to Florida residents</td>
<td>34,216,535</td>
<td>-0.8</td>
<td>33,943,071</td>
<td>1.1</td>
<td>34,331,384</td>
<td>6.3</td>
<td>36,491,586</td>
</tr>
<tr>
<td>Number of unique patients in Florida</td>
<td>6,263,705</td>
<td>0.4</td>
<td>6,291,294</td>
<td>4.8</td>
<td>6,594,101</td>
<td>11.6</td>
<td>7,359,995</td>
</tr>
<tr>
<td>Number of unique in-state prescribers</td>
<td>59,654</td>
<td>1.8</td>
<td>60,728</td>
<td>2.5</td>
<td>62,238</td>
<td>2.7</td>
<td>63,886</td>
</tr>
<tr>
<td>Prescriptions per patient</td>
<td>5.46</td>
<td>-1.2</td>
<td>5.4</td>
<td>-3.5</td>
<td>5.2</td>
<td>-4.8</td>
<td>5.0</td>
</tr>
<tr>
<td>Prescriptions per prescriber</td>
<td>573.58</td>
<td>-2.6</td>
<td>558.9</td>
<td>-1.3</td>
<td>551.6</td>
<td>3.6</td>
<td>571.2</td>
</tr>
<tr>
<td>Prescriptions per capita (annual estimates of population)</td>
<td>1.79</td>
<td>-2.0</td>
<td>1.8</td>
<td>-0.1</td>
<td>1.8</td>
<td>4.5</td>
<td>1.8</td>
</tr>
</tbody>
</table>

C. PERFORMANCE MEASURE: Percentage of schedule II-IV controlled substances prescribed per day by prescriber decile rank.

Figure 2 shows the percentage of all daily controlled substances (schedule II-IV) prescribed by decile of total prescribing in the current reporting period. The top one percent of controlled substance prescribers’ account for approximately 19 percent of total daily prescribing and the top 10 percent of prescribers account for approximately 64.2 percent of all prescribing. Taken alone, this data are not indicative of medical appropriateness of prescribing only volumes per prescriber.

Figure 2. Percentage of Schedule II-IV controlled substances prescribed per day by prescriber decile rank.
D. PERFORMANCE MEASURE: Number of prescriptions and percentage of total prescriptions of the most commonly dispensed controlled substances.

Hydrocodone with acetaminophen, alprazolam, and tramadol are ranked the top three most commonly dispensed controlled substances, representing 34.5 percent of the total controlled substances dispensed. Drugs with the largest year-to-year increases in dispensing were dextroamphetamine-amphetamine (13.4 percent) and oxycodone-acetaminophen (9.9 percent). Drugs with the largest year-to-year decreases in dispensing were hydrocodone-acetaminophen (-14.5 percent) and zolpidem (-5.5 percent). Reductions in hydrocodone-acetaminophen dispensing may be a result of the rescheduling of hydrocodone combination products from schedule III to schedule II.

Table 8. The number of prescriptions and percentage of total prescriptions of the top 10 most commonly dispensed controlled substances by generic name, an example brand name and drug class, to Florida residents.

<table>
<thead>
<tr>
<th>Generic Name</th>
<th>Drug Class</th>
<th>Brand Example</th>
<th>RY2014 No.</th>
<th>RY 2014 %</th>
<th>RY 2015 No.</th>
<th>RY 2015 %</th>
<th>Change (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrocodone-Acetaminophen</td>
<td>O</td>
<td>Vicodin</td>
<td>6,146,378</td>
<td>17.9</td>
<td>5,255,642</td>
<td>14.4</td>
<td>-14.5</td>
</tr>
<tr>
<td>Alprazolam</td>
<td>B</td>
<td>Xanax</td>
<td>4,308,924</td>
<td>12.6</td>
<td>4,310,772</td>
<td>11.8</td>
<td>&lt; 0.1</td>
</tr>
<tr>
<td>Tramadol</td>
<td>O</td>
<td>Ultram</td>
<td>N/A</td>
<td>N/A</td>
<td>3,037,799</td>
<td>8.3</td>
<td>N/A</td>
</tr>
<tr>
<td>Oxycodone-Acetaminophen</td>
<td>O</td>
<td>Percocet</td>
<td>2,723,100</td>
<td>7.9</td>
<td>2,991,372</td>
<td>8.2</td>
<td>9.9</td>
</tr>
<tr>
<td>Zolpidem</td>
<td>SD</td>
<td>Ambien</td>
<td>2,576,170</td>
<td>7.5</td>
<td>2,433,321</td>
<td>6.7</td>
<td>-5.5</td>
</tr>
<tr>
<td>Clonazepam</td>
<td>B</td>
<td>Klonopin</td>
<td>1,988,021</td>
<td>5.8</td>
<td>2,124,097</td>
<td>5.8</td>
<td>6.8</td>
</tr>
<tr>
<td>Lorazepam</td>
<td>B</td>
<td>Ativan</td>
<td>1,714,671</td>
<td>5.0</td>
<td>1,738,965</td>
<td>4.8</td>
<td>1.4</td>
</tr>
<tr>
<td>Dextroamphetamine-Amphetamine</td>
<td>ST</td>
<td>Adderall</td>
<td>1,301,550</td>
<td>3.8</td>
<td>1,475,853</td>
<td>4.0</td>
<td>13.4</td>
</tr>
<tr>
<td>Temazepam</td>
<td>B</td>
<td>Restoril</td>
<td>1,463,960</td>
<td>4.3</td>
<td>1,464,036</td>
<td>4.0</td>
<td>&lt; 0.1</td>
</tr>
<tr>
<td>Oxycodone Hydrochloride</td>
<td>O</td>
<td>OxyContin</td>
<td>1,324,827</td>
<td>3.9</td>
<td>1,398,397</td>
<td>3.8</td>
<td>5.6</td>
</tr>
</tbody>
</table>

B=Benzodiazepine, O=Opioid, SD=Sedative, ST=Stimulant, rank refers to the current reporting period

E. PERFORMANCE MEASURE: Prescription rates of select controlled substances by year, by drug class, sex and age group.

Females are more frequently prescribed opioids, stimulants, and benzodiazepines in all age groups analyzed. Regardless of sex, opioid prescribing begins to decline for individuals 65 and older whereas benzodiazepine prescribing continues to increase with age. Stimulant prescribing peaks for females in the age group of 35-44 years old.

Figure 3 shows prescribing rates per 1,000 total population of three classes of prescription drugs (opioids, stimulants, and benzodiazepines) observed by sex and age group in 2015.

Figure 3. Prescription rate per 1,000 by drug class, sex and age (females shown in black), current reporting period.
F. PERFORMANCE MEASURE: Prescribing rates per 1,000 population of controlled substances by Florida County.

After ranking prescribing rates per 1,000 population by quartiles, variation by geographic area and drug class is clear. For example, Miami-Dade County is one of the highest prescribing areas for benzodiazepines but one of the lowest areas for opioids. Other counties with divergent rates by drug class can be seen on the maps in Figure 4 below. Clusters of counties with high and low rates can also be observed. For example, Walton, Holmes, Washington, and Bay in the panhandle region are among the highest in prescribing of all the three drug classes analyzed. A cluster of Gulf counties with high rates of opioid prescribing in the north central region is also apparent.

Figure 4. Prescription rate per 1,000 county residents for all controlled substance prescriptions in schedules II through IV, opioids, stimulants, and benzodiazepines, current reporting period.

State Note: The quartiles referenced in Figure 4 are the points that divide a ranked set of data values into four equal groups.
3. **OUTCOME**: Increased coordination among partners participating in the prescription drug monitoring program.

A. **PERFORMANCE MEASURE**: The number of authorized users who have requested and received controlled substance dispensing information by user type.

The increased coordination among partners participating in the PDMP can be measured in terms of the number of authorized users who have requested and received controlled substance dispensing information. Health care practitioner queries increased 99.3 percent from 10,619,491 to 21,167,947, when compared to RY2014 (Table 9).

Table 9 shows pharmacists have the highest utilization rate, 89.1 percent, and have queried the PDMS 12,088,454 times. Furthermore, 72.6 percent of all prescribers registered to use the PDMS have queried 9,079,493 times. In particular, 7,348 of the 10,206 medical doctors who have registered to use the PDMS have queried 6,680,746 times. Overall, 25,833 (80.6 percent) of the 32,054 registered users have queried the PDMS 21,167,947 times.

Table 9. Health care practitioner utilization by license type.

<table>
<thead>
<tr>
<th>License Type</th>
<th>Registered Users (No.)</th>
<th>Users that have Queried (No.)</th>
<th>Users that have Queried (%)</th>
<th>RY2014 Queries (No.)</th>
<th>RY2015 Queries (No.)</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARNP</td>
<td>1,822</td>
<td>1,354</td>
<td>74.3</td>
<td>261,896</td>
<td>493,235</td>
<td>88.3</td>
</tr>
<tr>
<td>DN</td>
<td>776</td>
<td>455</td>
<td>58.6</td>
<td>10,820</td>
<td>16,680</td>
<td>54.2</td>
</tr>
<tr>
<td>ME</td>
<td>10,206</td>
<td>7,348</td>
<td>72.0</td>
<td>3,319,277</td>
<td>6,680,746</td>
<td>101.3</td>
</tr>
<tr>
<td>OPC</td>
<td>8</td>
<td>2</td>
<td>25.0</td>
<td>3</td>
<td>3</td>
<td>0.00</td>
</tr>
<tr>
<td>OS</td>
<td>2,242</td>
<td>1,706</td>
<td>76.1</td>
<td>765,131</td>
<td>1,509,577</td>
<td>97.3</td>
</tr>
<tr>
<td>PA</td>
<td>1,397</td>
<td>1,106</td>
<td>79.2</td>
<td>234,318</td>
<td>376,063</td>
<td>60.5</td>
</tr>
<tr>
<td>PO</td>
<td>136</td>
<td>78</td>
<td>57.4</td>
<td>1,955</td>
<td>3,189</td>
<td>63.1</td>
</tr>
<tr>
<td>PS</td>
<td>15,467</td>
<td>13,784</td>
<td>89.1</td>
<td>6,026,091</td>
<td>12,088,454</td>
<td>100.6</td>
</tr>
<tr>
<td>TOTAL</td>
<td>32,054</td>
<td>25,833</td>
<td>80.6</td>
<td>10,619,491</td>
<td>21,167,947</td>
<td>99.3</td>
</tr>
</tbody>
</table>

ARNP=Advanced Registered Nurse Practitioner; DN=Dentist; ME=Medical Doctor; OPC=Certified Optometrist; OS=Osteopathic Physician; PA=Physician Assistant; PO=Podiatric Physician; PS=Pharmacist

Certain law enforcement and investigative agencies may request controlled substance prescription information from the program manager during the course of an active investigation related to prescribed controlled substances. During the reporting period, law enforcement and investigative agencies have appointed 512 authorized users of whom 297 have submitted requests. There has been a 37.5 percent reduction in the number of requests from 10,419 in 2014 to 6,509 (Table 10). This decrease in the number of requests is attributed to the implementation of the new law requiring law enforcement agencies to enter into a user agreement with DOH prior to requesting information, and requiring authorized users to meet certain requirements.

Table 10. Investigative agency registration and utilization by agency type.

<table>
<thead>
<tr>
<th>Agency</th>
<th>Users that have Queried (No.)</th>
<th>Requests RY2014 (No.)</th>
<th>Requests RY2015 (No.)</th>
<th>Change (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Law Enforcement</td>
<td>202</td>
<td>10,320</td>
<td>6,396</td>
<td>-38.0</td>
</tr>
<tr>
<td>Attorney General’s Medicaid Fraud Unit</td>
<td>4</td>
<td>89</td>
<td>94</td>
<td>5.6</td>
</tr>
<tr>
<td>DOH Regulatory Board</td>
<td>1</td>
<td>10</td>
<td>19</td>
<td>90.0</td>
</tr>
<tr>
<td>TOTAL</td>
<td>297</td>
<td>10,419</td>
<td>6,509</td>
<td>-37.5</td>
</tr>
</tbody>
</table>
The law enforcement query request module was also enhanced to capture and report standardized descriptions pertaining to the purpose of the request as well as notifying the agency administrator when a request was made. Tracking query purpose can provide E-FORCSE staff and agencies with additional information regarding the community’s controlled substance diversion and abuse challenges and provides justification for the query request. Law enforcement and investigative agencies also have an opportunity to upload documents for review.

During the period between January 1 through September 30, 2015, law enforcement requested 3,654 queries which includes active investigations involving potential criminal activity regarding prescribed controlled substances, fraud, theft, and other specific crimes related to controlled substances (Table 11). There were 3,174 request regarding potential criminal activity, 285 requests related to fraud investigations as well as 65 cases involving theft of controlled substances.

Table 11. Investigative agency query request by purpose.

<table>
<thead>
<tr>
<th>Query Purpose</th>
<th>Number of Queries</th>
</tr>
</thead>
<tbody>
<tr>
<td>An active investigation of potential criminal activity regarding prescribed controlled substances</td>
<td>3,174</td>
</tr>
<tr>
<td>An active investigation of potential fraud regarding prescribed controlled substances</td>
<td>285</td>
</tr>
<tr>
<td>An active investigation of theft regarding prescribed controlled substances</td>
<td>65</td>
</tr>
<tr>
<td>Other-identify the specific crimes being investigated in the space below</td>
<td>130</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>3,654</strong></td>
</tr>
</tbody>
</table>

B. PERFORMANCE MEASURE: Florida prescriber queries and prescriptions dispensed by schedule.

Two important scheduling events occurred during the current report year, the DEA re-scheduled hydrocodone combination products from schedule III to schedule II in October 2014 and the scheduling of tramadol, previously not monitored in Florida, to schedule IV. These changes had impacts on trend analysis by schedule and can be seen in Figure 5.

After the scheduling of tramadol, the mean number of schedule IV prescriptions per month increased from 1,303,163 to 1,540,817. Similarly, rescheduling of hydrocodone increased the number of schedule II prescriptions (mean per month from 760,215 to 1,267,624) by a similar degree of magnitude that it decreased the number of schedule III prescriptions (mean per month from 681,302 to 217,661).
C. PERFORMANCE MEASURE: Percentage of the top 200 prescribers who are registered to access the PDMS and percentage of those registered who have queried patient specific controlled substance dispensing information.

In Florida, allopathic physicians make up 87 percent (174) and osteopathic physicians 13 percent (26) of the top 200 prescribers of controlled substances; 84 percent (167) of the top 200 prescribers have registered to use the PDMS of which 98 percent (163) have queried their specific patients’ controlled substance histories.

D. PERFORMANCE MEASURE: The mean daily dosage per patient in morphine milligram equivalents (MMEs) by quarter and year.

Morphine is widely regarded as the ‘gold standard’ for the treatment and management of moderate to severe pain and, therefore, is used as the reference point for other opioids.24

The MME performance measurements may help identify the number of patients who may be at risk for abuse, ensure patients treated with opioids receive the appropriate dose and quantity of medication for their condition, and assist in efforts to address overdoses and deaths from opioid medications. Studies have shown that opioid usage for more than three months can lead to tolerance and dependence resulting in higher dosages being prescribed to the patient. As dosage increases, the likelihood of an adverse reaction increases. Evidence suggests that a patient, receiving more than 100mg MMEs, is nine times more likely to overdose with 12 percent of those resulting in death.25

In an effort to assist prescribers and dispensers to identify at-risk patients, E-FORCSE implemented an enhancement to the PAR in January 2015, to include the morphine equivalent.
dosing (MED) for each opioid prescription dispensed to the patient. It also provides a MED Summary section at the bottom of the report, which displays the cumulative MED values and the cumulative MED sustained for any three consecutive days during the date range requested.

Figure 6 shows the percentage of patients with exposure to higher than 100 morphine milligram equivalents (MME) per day and the mean MMEs for patients receiving opioids. When the PDMP began operating in October 2011, approximately 17.7 percent of patients were exposed to greater than 100 MME/day and as of the end of the reporting period, 7.1 percent of opioid-prescribed patients had exposure to these doses. The decline in patients receiving these doses is also reflected in the mean MME. The mean MME has declined 34.2 percent from 88.2 MME in 2011 to 58.0 MME at the end of Q3 2015.

![Figure 6](image)

Figure 6. The mean daily dosage per patient in morphine milligram equivalents (MMEs) (line) and the percentage of patients on opioids receiving a dosage >100 MMEs.

E. PERFORMANCE MEASURE: Number of patients receiving concurrent prescriptions of an opioid, alprazolam and carisoprodol (OAC) in a month.

The concurrent dispensing of an opioid (hydrocodone or oxycodone), alprazolam and carisoprodol (OAC) was evaluated based on a similar analysis conducted by the Institute for Pharmaceutical Outcomes and Policy at the University of Kentucky. This combination is known as the ‘holy trinity’ on the street and has been associated with abuse. Patients who received a prescription for all three medications within a one-month period were defined as having concurrent prescriptions for OAC. Since October 2011, the number of patients receiving OAC has decreased 66 percent from 12,276 to 4,193 (Figure 7).
Figure 7. Number of Florida patients receiving concurrent prescriptions of an opioid, alprazolam and carisoprodol (OAC) in a month: 2012 to 2015.

4. OUTCOME: Involvement of stakeholders in achieving improved patient health care, safety, and reduction of prescription drug abuse and prescription drug diversion.

Through its 2013 Harold Rogers Data-Driven Multi-Disciplinary Approach to Reducing Prescription Drug Abuse Grant, DOH has established a long-term collaboration between the PDMP, law enforcement, public health and research community in Florida to collect and analyze data by centralizing existing data sources, completing practitioner surveys and establishing a focus group; increase the engagement of Florida’s public health community in PDMP use via early participation in technical design and development of practitioner metrics; work with interested parties and stakeholders to develop educational opportunities and brochures to educate health care practitioners regarding legitimate and appropriate use of controlled substances; and develop valid data-driven analytic strategies.

A. PERFORMANCE MEASURE: Multiple provider episode rates based on number of individuals visiting x number of prescribers and x number of dispensers in a 90-day period.

Using the data in this performance measure demonstrates the value of the PDMP as a clinical decision making tool to reduce prescription drug abuse, misuse and diversion. A multiple provider episode is defined as use of five or more prescribers and five or more pharmacies within three months. Data supports that as registration and utilization of E-FORCSE by prescribers and dispensers increases, the number of multiple provider episodes decreases.

During the first quarter of E-FORCSE’s operation (October 1, 2011 to December 31, 2011), E-FORCSE data indicated there were 2,864 individuals who had one or more controlled substance prescription drugs prescribed to them by more than five prescribers and dispensed at
more than five pharmacies in a 90-day period. By the end of the third quarter of 2015 (July 1, 2015 to September 30, 2015), there was a 65 percent reduction or 1,006 individuals visiting more than five prescribers and more than five pharmacies within 90 days (Figure 8). During the same initial time period there were 105 individuals who had one or more prescription drugs prescribed to them by more than ten prescribers and dispensed at more than ten pharmacies in a 90-day period. By the end of the third quarter of 2015 (July 1, 2015 to September 30, 2015), there was an 85 percent reduction or 20 individuals visiting more than ten prescribers and more than ten pharmacies within 90 days (Figure 8).

Figure 8. Number of individuals obtaining controlled substance prescriptions in schedules II-IV from 5 (10) or more prescribers and 5 (10) or more dispensers within a 90-day period, December 2011 to September 2015.

B. PERFORMANCE MEASURE: Multiple provider episode rates by quarter and year, by drug schedule and age group.

The reduction in the quantity of pharmaceutical controlled substances obtained by individuals can be measured in terms of the number of multiple provider episode rates by quarter and year by schedule and age group, reported by quarter and year per 100,000 state residents. Multiple provider episodes in Figure 9 are defined as the number of individuals receiving and filling a schedule II or III prescription at five or more prescribers and five or more pharmacies within a 90 day period.

Figure 9 illustrates the decline of multiple provider episodes rates for individuals receiving a schedule II or III controlled substance for all age groups with the highest rate of decline in age groups 35-54 followed by 18-34 year olds.
C. PERFORMANCE MEASURE: The number of medical examiner reports that indicate controlled prescription drug use as the primary or contributing cause of death.

The involvement of stakeholders in achieving improved patient health care, safety, and reduction of prescription drug abuse and prescription drug diversion can be measured in terms of the number of deaths reported by the Florida Medical Examiners where a controlled substance prescription drug was the primary or contributing cause of death. The Drugs Identified in Deceased Persons by Florida Medical Examiners 2014 Annual Report\textsuperscript{27} shows occurrences of oxycodone decreased by 7.1 percent and deaths caused by oxycodone decreased by 12.0 percent between 2013 and 2014. Oxycodone caused deaths have also continued to decrease over the past five years (a 69 percent decrease when compared with 2010). Delcher \textit{et al} 2015 showed that oxycodone-caused deaths declined by 25 percent immediately after implementation of the PDMP and after multiple important law enforcement and public health actions occurred near or around the same time.\textsuperscript{28} Figure 10 shows the number of oxycodone-caused deaths by year with the year of PDMP implementation shown in grey.

Medical Examiners also reported a decline in occurrences and deaths associated with methadone and hydrocodone in 2014. Overall, while deaths related to oxycodone and methadone decreased, occurrences of tramadol (7.3 percent) and morphine (25.8 percent) increased when compared to 2013. Deaths caused by tramadol (6 more than 2013) and morphine (137 more than 2013) increased in 2014.\textsuperscript{29}
Figure 10. Annual oxycodone mortality, 2005-2014

Figure 11 illustrates from 2010 to 2014, the rate of oxycodone-caused mortality declined from 8.0 to 2.4 per 100,000 population (a 70 percent decrease). Alprazolam and methadone-caused mortality rate declined over the same period by 45 percent and 57 percent, respectively. From 2013 to 2014, alprazolam-caused mortality increased slightly from 2.6 per 100,000 to 2.9 per 100,000. Hydrocodone-caused deaths remained stable from 2010 to 2014. Morphine-caused mortality rates have increased from 1.4 to 3.5 per 100,000 (+155 percent) and the number of heroin-caused death increased from 48 to 408 (0.25 to 2.05 per 100,000 population, +705 percent) during 2010 to 2014.

ALP=alprazolam; HER=heroin; HYD= hydrocodone; MET= methadone; MOR=morphine; OXY=oxycodone

Figure 11. Mortality rate per 100,000 population for licit and illicit drugs from 2005 to 2014.
D. PERFORMANCE MEASURE: The number of Florida substance abuse treatment admissions by substance type.

The Treatment Episode Data Set (TEDS) is maintained by the Center for Behavioral Health Statistics and Quality, Substance Abuse and Mental Health Services Administration (SAMHSA). The TEDS system includes records for substance abuse treatment admissions annually. Data shown here are routinely collected by states to monitor their individual substance abuse treatment systems.\(^\text{30}\)

Other opiates includes admissions for non-prescription use of methadone, codeine, morphine, oxycodone, hydromorphone, meperidine, opium, and other drugs with morphine-like effects. Treatment admissions for other opiates increased from 2,553 in 2005 to 26,974 in 2011. However, since 2011, treatment admissions for this group declined by 53 percent (12,787 in 2013). Since 2010, heroin admissions have increased from 1,366 to 2,597 in 2013, a 90 percent increase. Alcohol treatment admissions are shown for reference.

![Figure 12. Florida substance abuse treatment admissions, TEDS, 2005-2013.](image_url)

E. PERFORMANCE MEASURE: The number of hospital discharges with poisoning as a principal diagnosis, by substance type.

The number of discharges from Florida hospitals due to poisoning by pharmaceutical opioids reached their peak in Q3 2011 at 956 discharges. This was the same quarter as PDMP implementation and it was immediately followed by three quarters of declines. A rise in the number of discharges due to heroin poisoning is apparent in recent years. In 2014, there were 360 discharges for heroin poisoning, which is higher than any other year in the analysis.
Conclusion

The effectiveness of E-FORCSE as a tool to decrease prescription drug abuse and diversion is demonstrated when comparing the performance measures reported during October 1, 2013 through September 30, 2014 to October 1, 2014 through September 30, 2015.

There have been 36,491,586 prescriptions reported by 6,423 dispensers for 7,359,995 unique Florida residents, indicating each unique patient received an average of 5.0 prescriptions, a decrease from 5.2 the previous reporting period. Although dispensers are required to report controlled substance dispensing information to E-FORCSE within 7 days of dispensing, 65 percent of pharmacy dispensers reported within 24 hours.

This report documents numerous enhancements that E-FORCSE made to its program during the reporting period, including: increased outreach and education to health care professionals and stakeholders, a redesigned user interface, new training materials, new module for law enforcement and investigative agencies to improve information privacy and security, and implementation of its proactive reporting programs for health care practitioners and law enforcement. These program enhancements resulted in increased registration and utilization by health care practitioners and resulted in significant reductions in the average morphine milligram equivalents (MMEs) per patient.

While its use is not mandatory, physicians and pharmacists have queried E-FORCSE more than 21 million times and through outreach and educational efforts, E-FORCSE registration increased 16.9 percent and utilization increased 99.93 percent. During the most recent quarter, 25.9 percent of the 64,129 in-state prescribers who issued one or more controlled substance
prescriptions were registered to access the PDMS, suggesting it is becoming an integral part of everyday clinical practice. This demonstrates the value of the PDMP as a clinical decision making tool to reduce prescription drug abuse, misuse and diversion.

Increased utilization of the PDMS resulted in a 34.2 percent reduction in average morphine milligram equivalents (MMEs) per patient since the PDMP became operational.

Of the top ten controlled substances dispensed hydrocodone with acetaminophen, alprazolam and tramadol are ranked the top three most commonly dispensed controlled substances, representing 34.5 percent of the total. Drugs with the largest year-to-year increases in dispensing were dextroamphetamine/amphetamine (13.4 percent) and oxycodone-acetaminophen (9.9 percent). Drugs with the largest year-to-year decreases in dispensing were hydrocodone-acetaminophen (-14.5 percent) and zolpidem (-5.5 percent).

*Drugs Identified in Deceased Persons by Florida Medical Examiners 2014 Report*, shows deaths caused by oxycodone plunged 12 percent in 2014, and overall drug deaths fell by 7.6 percent when compared to 2013. Between Q4 2011 and Q3 2015, the PDMP documented a 65 percent decrease in the number of individuals receiving prescriptions from five or more prescribers and five or more pharmacies within 90 days period.

E-FORCSE has proven to be a critical tool in the fight to protect health and safety by reducing doctor shopping and controlled substance related deaths, while supporting sound clinical practice in the prescribing of controlled substances.
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