E-FORCSE®

Electronic-Florida Online Reporting of Controlled Substances Evaluation

2016-2017
Prescription Drug Monitoring Program Annual Report

December 1, 2017

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Governor

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Message from the Surgeon General and Secretary

It gives me great pleasure to present Florida's 2016-2017 Prescription Drug Monitoring Program (PDMP) Annual Report. The PDMP, known as E-FORCSE® (Electronic-Florida Online Reporting of Controlled Substances Evaluation), exemplifies the Department of Health's (Department) mission to protect, promote and improve the health of all people in Florida through integrated state, county and community efforts.

Health care professionals have a crucial role in ensuring the best care for their patients and communities, including optimal and safe pain management. 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 the 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. A significant increase in registration, utilization and reduction of morphine equivalent dosing by prescribers reflects the usefulness of Florida's PDMP.

Today, there are over 232 million controlled substance prescription dispensing records maintained in the PDMS. In the first five years of operation, physicians and dispensers made more than 35.8 million requests to view their specific patients' controlled substance dispensing histories. This year, investigative agencies have requested and received more than 4,961 investigative reports from E-FORCSE staff to assist in active criminal investigations involving controlled substances.

This spring, House Bill (HB) 557 was passed by the Florida Legislature and signed into law by Governor Rick Scott, expanding PDMP access by allowing employees from the Department of Veterans' Affairs to review a patient's dispensing history. The new law also requires a dispenser to upload controlled substance dispensing information by the close of business the following day. The Legislature also ensured adequate recurring funding for the program's future.

The PDMP is an important resource for clinicians, allowing them to view patients' controlled substance dispensing history, leading to more responsible prescribing practices. I urge health care practitioners to utilize this program and refer to PDMP records as they treat patients.

Celeste Philip, MD, MPH
Surgeon General and Secretary

Prescription Drug Abuse Epidemic: Florida Timeline

2009
• 1 in 8 deaths attributable to prescription drug overdose
• June - Governor signed SB 462 into law creating the PDMP
• 2,488 overdose deaths

2010
• 90 of the top 100 physicians purchasing oxycodone were located in Florida
• 2,710 overdose deaths

2011
• March- Governor created Statewide Drug Strike Force
• June- Governor signed HB 7095 into law impacting controlled substance distribution, prescribing, and dispensing
• July- Statewide public health emergency declared
• September- implementation of the PDMP
• 2,539 overdose deaths

2012
• CDC classified prescription drug abuse as an epidemic
• Reduction in MPE
• Reduction in overdose deaths
• 2,090 overdose deaths

2013
• PDMP funded by General Revenue
• Reduction in MPE
• Reduction in overdose deaths
• 1,916 overdose deaths

Executive Summary

As required by section 893.055(8), Florida Statutes, the 2016-2017 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 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 6,024 dispensers report controlled substance prescription information into the system, and 96 percent of dispensers complied with the mandated seven-day statutory limit for reporting.

Increase in Prescriber Enrollment and Utilization –
E-FORCSE staff have provided outreach and education to 49,520 health care practitioners and 558 individuals authorized to conduct investigations resulting in an 18.9 percent increase in registration and 30.3 percent increase in the number of query requests.

Impact on Prescriber Behavior –
There has been a seven percent decrease in the number of patients who have received a schedule II-IV controlled substance, and an 8.9 percent decrease in the number of patients receiving a schedule II controlled substance.

Impact on Patient Behavior –
Through monitoring and analysis of multiple provider episodes (MPEs), an increase in health care practitioner utilization, proactive notification to prescribers and law enforcement, Florida has seen a 69.3 percent reduction in the number of individuals having MPEs.

Introduction

Current Situation

Opioid use and abuse involves both pharmaceutical and non-pharmaceutical substances. Although the PDMP operates to reduce inappropriate availability of opioids from medical sources, it is important to recognize the broader opioid epidemic in Florida and the country. For example, heroin and fentanyl have had a resurgence in our nation and Florida is no exception with 952 heroin-related and 1,390 fentanyl-related deathsin 2016.[1] Four in five new heroin users began misusing prescription pain medications.[2] Especially hard hit counties have been Palm Beach (205), Broward (180), Miami-Dade (139), and Duval (81). The counties with the highest number of deaths with fentanyl include Palm Beach (313), Duval (239), Miami-Dade (164), Broward (146), and Orange (57). Deaths caused by heroin and fentanyl increased 30 percent and 97 percent respectively in 2016.[3]

Multiple changes in state policy over the last several years have contributed to declines in the number of controlled substance prescriptions, total prescription opioid volume written, Morphine Milligram Equivalents per prescription, and the prescription opioid death rate.[4,5,6,7] For example, from 2010 to 2014, the rate of oxycodone- and alprazolam-caused deaths declined 70.6 percent (from 8.0 to 2.4 per 100,000 population) and 45.1 percent (from 5.2 to 2.9 per 100,000 population), correspondently.[8] The number of patients who had controlled substances prescribed by greater than or equal to five prescribers and dispensed by greater than or equal to five pharmacies in a 90-day period, a key indicator of MPEs, declined by 69.3 percent. According to the U.S. Centers for Disease Control and Prevention (CDC), Florida experienced a 23 percent decline in drug poisoning deaths from 2010 to 2013, ranking it first among states and one of only two states that experienced a decrease from 2010 to 2014.[9]

The observed progress in some prescription drug-related outcomes is a positive development in Florida, but old challenges such as an increase in deaths related to heroin drug abuse have resurfaced and new challenges such as an increase in deaths associated with fentanyl use have emerged. National concerns have arisen that rapid declines in prescription opioid availability, in the absence of reducing demand driven by opioid use disorders, have resulted in opioid substitutions and other adverse outcomes.[10,11] In 2015, Florida experienced an increase in oxycodone-caused deaths, the first time in six years.

On May 3, 2017, Governor Scott signed an Executive Order directing the Surgeon General to declare a Public Health Emergency across the state for the opioid epidemic. The Executive Order was subsequently renewed on June 29, 2017 and August 28, 2017 and directed the Surgeon General to issue a standing order for naloxone for emergency responders to help save lives.[12,13,14] Likewise, on October 26, 2017, the Trump Administration declared the opioid crisis a national public health emergency.[15]

Prescription Drug Abuse Epidemic: Florida Timeline (cont.)

2014
- Reduction in MPE
- Reduction in oxycodone overdose deaths
- 2,062 overdose deaths

2015
- June- Governor signed HB751 into law creating the Emergency Treatment & Recovery Act authorizing Naloxone use
- PDMP funded by General Revenue
- Reduction in MPEs
- 2,530 overdose deaths

2016
- March- CDC releases Guidelines for Prescribing Opioids for Pain
- April – Governor signed SB964 into law authorizing direct access by designees and indirect access by impaired practitioner consultants
- April – Governor signed SB1604 into law creating a written pamphlet regarding controlled substances including specific information
- Reduction in MPEs
- Reduction in MMEs
- PDMP funded by General Revenue

2017
- May- Governor issued an Executive Order- Public Health Emergency
- June- Governor signed HB557 into law mandating dispensers report by the next business day; authorizes access by employees of VA

Florida HEALTH

Legal Framework

Summary of Statute

Section 893.055, Florida Statutes, requires the Department to maintain an electronic system to collect and store controlled substance dispensing information to release as authorized in section 893.0551, Florida Statutes. The system must not infringe upon the legitimate prescribing or dispensing of a controlled substance by a prescriber or dispenser. Below, Table 1 summarizes PDMP and related legislation passed from 2009 through 2017.

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

Year	Bill Number	Summary of Changes
2009	SB462	Created section 893.055, F.S., establishing the PDMP.
	SB440	Created section 893.0551, F.S., exempting information contained in the PDMP from public record requirements.
2010	SB2772	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.
2011	HB7095	Amended section 893.055, F.S., reassigning the duties of the Governor's Office of Drug Control to the Department; 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 individuals who have direct access to the PDMP.
2013	HB1159	Appropriated $500,000 of nonrecurring general revenue funds for the general administration of the PDMP for fiscal year 2013-2014.
2014	HB7177	Amended sections 893.055 and 893.0551, F.S., renewing the public record exemption and requiring law enforcement and investigative agencies to enter a user agreement with the Department. 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.
2015	SB2500A	Appropriated $500,000 of general revenue funds for the general administration of the PDMP for fiscal year 2015-2016.
2015	HB751	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.
2016	SB964	Amended sections 893.055 and 893.0551, F.S., authorizing direct access to the information in the PDMP for designees of prescribers and dispensers and authorizing indirect access for impaired practitioner consultants.
2016	SB1604	Created section 893.30, F.S., establishing the "Victoria Siegel Controlled Substance Safety Education and Awareness Act" requiring the Department to develop a written pamphlet relating to controlled substances which includes specific educational information and make available to health care practitioners, and entities to disseminate and display. The Department shall also encourage consumers to discuss the risks of controlled substance abuse with their health care providers.
2017	HB557	Amended section 893.055, F.S., requiring dispensers of controlled substances in schedules II-IV , to report to the department dispensing information no later than the close of the next business day; clarifies the exemption from reporting of information for a rehabilitative hospital, assisted living facility, or nursing home dispensing certain

	dosage of controlled substance as needed; authorizes access to the database by an employee of the United States Department of Veteran Affairs under certain conditions.
HB5203	Amended section 893.055, F.S., authorizing the department to use state funds appropriated through the General Appropriations Act to fund the administration of the Prescription Drug Monitoring Program
HB7097	Amended section 893.055 extending the repeal of the Direct Support Organization for the Prescription Drug Monitoring Program until October 1, 2027.

Florida PDMP Funding

Since implementation of the PDMP in 2009, there have been four sources of funding for the administration of the program, as outlined below. The Department 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.

1. **General Revenue** – HB5203 was passed by the 2017 Florida Legislature and authorizes the Department to use state funds appropriated through the General Appropriations Act to fund the administration of the PDMP. The Florida Legislature has authorized general revenue appropriations of $500,000 for administration of the PDMP for FY2013-14, FY2015-16, FY2016-17 and FY2017-18.
2. **Private Fundraising** – The Florida PDMP Foundation (Foundation), Inc., is a 501(c)(3), not-for-profit organization incorporated with the Florida Department of State. The Foundation operates as a direct support organization for the Department to provide funding and support for the PDMP. Since its formation, the Foundation has raised over $2.2 million and has provided $1,010,513 to fund the administration of the PDMP.
3. **Federal Grants** - The PDMP has been awarded six federal grants totaling $2,443,471, which are based on specific projects outlined in the grant application and only a limited portion (if any) may be used to offset infrastructure, personnel, and facility expenses. The PDMP has applied for and was awarded five Harold Rogers PDMP grants from the Department of Justice, Office of Justice Programs, Bureau of Justice Assistance and one grant from the Substance Abuse and Mental Health Services Administration.
4. **Private Grants** - The PDMP was awarded three grant awards from the National Association of State Controlled Substance Authorities totaling $49,952. These private grant funds were used to create a website, to purchase office equipment, and to purchase promotional items.

Grant Funded Projects

The PDMP has relied on grant funding to offset system implementation enhancement costs to the PDMS. The Department has received federal funding through six 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.

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 and analysis of the impact on prescriber behavior and law enforcement efforts; develop algorithms 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 June 30, 2018.

Department of Children and Families Partnerships for Success (PFS) Grant - $86,625

Grant funds for this award are being used to ensure the PDMS includes additional alert features and computer based training, to encourage safer prescribing of controlled substances and reduce drug abuse and diversion within the state of Florida. The project period ends September 30, 2021.

University of Florida Harold Rogers Prescription Drug Monitoring Program: Data-Driven Responses to Prescription Drug Abuse Grant 2016-PM-BX-K005 – $17,500

Grant funds for this award will be used to link de-identified PDMP data with other key data sources to improve care coordination. The project period ends September 30, 2019.

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 PDMP information on clinical practice and patient outcomes, and evaluate the impact of the PDMP on community health.

Technical Notes

The current report year (RY) covers the period July 1, 2016 (Q3-Q4 2016) to June 30, 2017 (Q1-Q2 2017). Direct year-to-year comparisons in the report are based on report years. Trend analyses are based on calendar year (CY). In this report, controlled substance means any substance named or described in schedules II through IV of section 893.03, Florida Statutes.

Drug categories for maps and figures include:

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

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

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

Outcomes

To assist in fulfilling program responsibilities, the Department 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 Department 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 PDMS.

E-FORCSE® (Electronic-Florida Online Reporting of Controlled Substances Evaluation) staff have provided outreach and education to 50,078 prescribers, dispensers, and individuals authorized to conduct investigations (Table 2). Because of this training there has been an 18.9 percent increase in prescriber and dispenser registration and a 30.3 percent increase in the number of queries requested (Table 7). Although training declined for licensed prescribers (-19.4 percent) and individuals authorized to conduct investigations (-57.4 percent), registration by physicians (ME) and osteopathic physicians (OS) increased on average 20 percent and the number of queries increased 33.6 percent (Table 7). Investigative agency registration and utilization has also decreased 21 percent from RY16 to RY17 (Table 8). Outreach and education efforts for pharmacists increased by 93.3 percent from 11,328 pharmacists in RY16 to 21,899 in RY17, which resulted in a 26.4 percent increase in queries by pharmacists.

Table 2. The number of individuals trained in the use of Florida's PDMP, RY16 to RY17.

Individuals Trained to Use E-FORCSE	RY16 (No.)	RY17 (No.)	Change (%)
Licensed prescribers in the state[16]	124,933	131,144	5.0%
Licensed prescribers formally and informally trained in the use of E-FORCSE	34,290	27,621	-19.4%
Licensed pharmacists in the state[17]	30,093	30,247	0.5%
Licensed pharmacists formally and informally trained to use E-FORCSE	11,328	21,899	93.3%
Certified Law Enforcement Officers[18]	50,010	51,205	2.4%
Individuals authorized to conduct investigations formally and informally trained[19] to request & receive information	1,309	558	-57.4%
Individuals visited website www.e-forcse.com	254,093	445,300	75.3%

B. PERFORMANCE MEASURE: The percentage of surveyed health care practitioners who considered E-FORCSE a useful tool to identify "doctor shopping."

The effectiveness of E-FORCSE as a tool to decrease prescription drug abuse and diversion is demonstrated through health care practitioner attitudes regarding the effectiveness of E-FORCSE as a tool to identify "doctor shopping."

In spring 2016, the PDMP and the University of Florida conducted a user survey to gather information regarding demographic/practice information, knowledge of the PDMP, frequency of PDMP use, attitudes toward PDMP mandatory use, prescribing volumes, barriers to PDMP use, how the PDMP is used in practice and the impact of the PDMP. The survey was sent to 34,633 registered PDMP users, and 5,766 responses were received. Question 10 of the survey asked *"In your experience, how useful has E-FORCSE been for identifying "doctor shopping" (i.e., patients seeking to inappropriately obtain controlled substances from multiple sources)?"* Figure 1 below provides a summary of responses to this question, by license type and shows that respondents overwhelmingly agreed that the PDMP is an effective tool to identify behavior associated with prescription drug abuse and diversion.[20]

License Type	Percentage
Optometrist (N=3)	100.0%
Pharmacist (N=2,752)	96.0%
Physician Assistant (N=254)	93.7%
Osteopathic Physician (N=279)	92.5%
Advanced Registered Nurse Practitioner (N=411)	91.5%
Medical Doctor (N=1,500)	87.5%
Dentist (N=133)	72.9%
Podiatric Physician (N=15)	60.0%
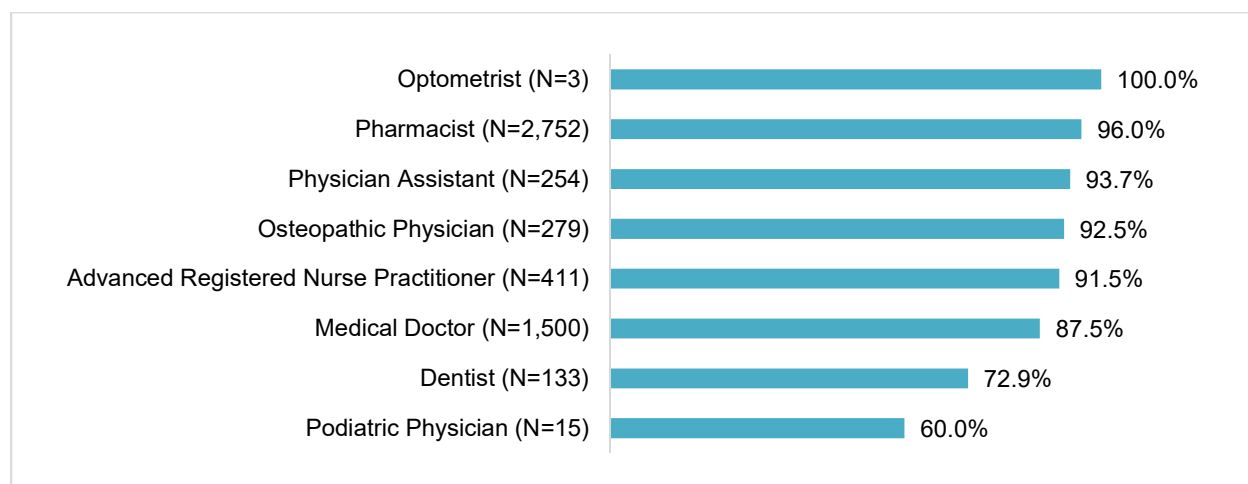
Figure 1. Percentage of the surveyed health care practitioners who considered E-FORCSE a "useful/somewhat useful" tool to identify "doctor shopping."

C. PERFORMANCE MEASURE: The number of patients receiving concurrent prescriptions of an opioid, alprazolam and carisoprodol (OAC), per year.

The concurrent dispensing of an opioid (hydrocodone or oxycodone), alprazolam and carisoprodol (OAC), known by the street name "holy trinity," has been associated with abuse and is rarely medically-justified.[21] Some health care systems specifically target this type of prescribing as a strategy to improve patient safety.[22] 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 74.7 percent from 12,273 to 3,111 (Figure 2).
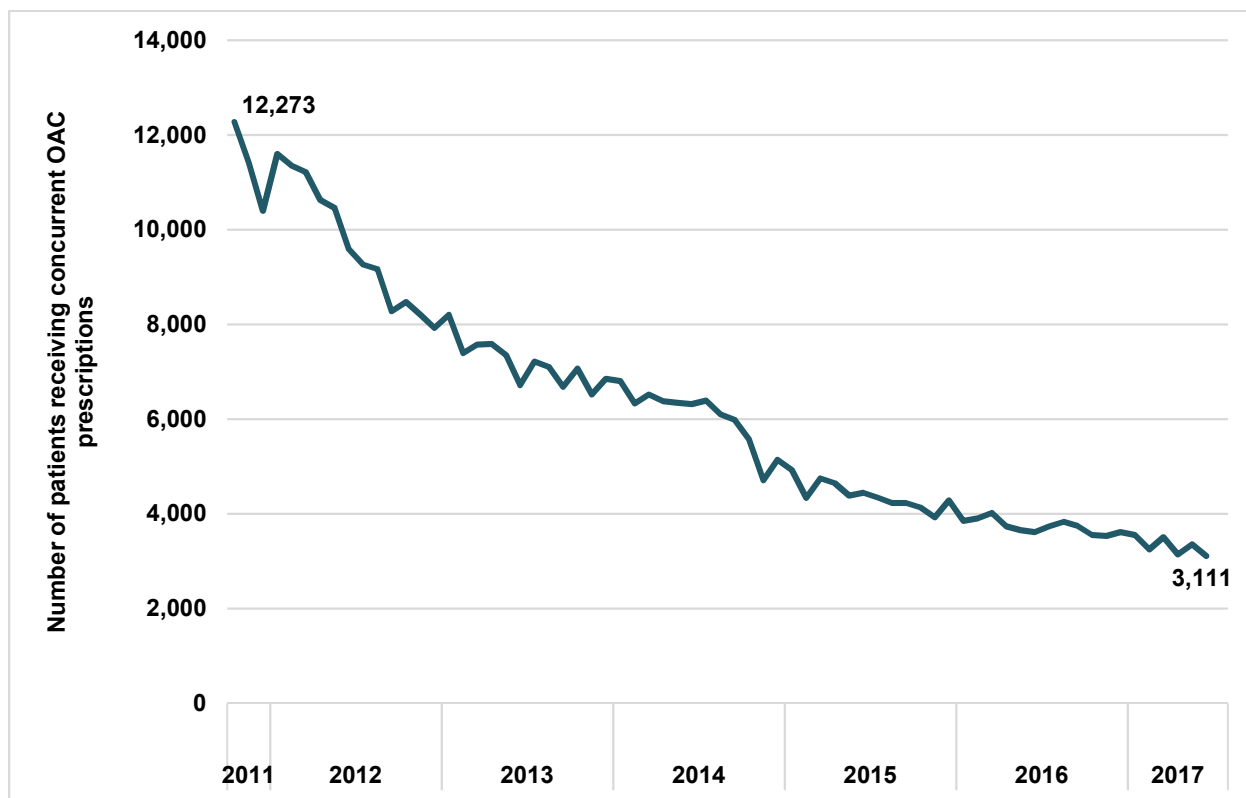
Figure 2. Number of Florida patients receiving concurrent prescriptions of an opioid, alprazolam and carisoprodol (OAC) in a month: 2011Q4 to 2017Q2.

D. PERFORMANCE MEASURE: The days' supply and daily morphine milligram equivalent dosage for patients who were opioid naïve in 2016.

The PDMP plays an important role in preventing opioid abuse by enabling health care practitioners to identify patients who are at-risk, as early as possible. Patients who are exposed to opioids for the first time are referred to as "opioid naïve" and understanding the days' supply of opioid prescriptions provided to these patients is important. For the purposes of this report, an opioid naïve patient is defined as having no opioid prescription in the prior 180 days, excluding patients with buprenorphine in 2015-2016.

In a recent study regarding the characteristics of initial prescription episodes and likelihood of long-term use, CDC found that the likelihood of chronic opioid use increased with each additional day of medication supplied, beginning with the third day. The study found that the sharpest increases occurred after the fifth and thirty-first day and about one out of five patients became a long-term user after receiving a 10-day supply of opioids.[23]

To help support efforts to quantify the number and exposure of the opioid naïve in Florida, the PDMP and the University of Florida determined that there were approximately 3.6 million opioid naïve patients in 2016. Table 3 illustrates 3,086,208 (86.6 percent) of the patients received greater than or equal to a 3-days' supply; 2,104,587 (59.1 percent) patients received greater than or equal to a 5-days' supply; and 1,383,589 (38.8 percent) received greater than or equal to a 7-days' supply. Given the increasing risk of chronic opioid use with increasing number of days supplied, it is of concern that 1,383,589 (38.8 percent) patients received a days' supply

greater than seven days. Preliminary estimates indicate 206,088 recipients (5.8 percent) may have exceeded the daily MMEs levels recommended by the CDC.

Table 3. Number of opioid naïve* patients, days' supply and daily MME greater than 90, RY16

Opioid Naïve Patients in CY16 (N = 3,563,533)		
Days' Supply	**Number of Patients**	**Percentage (%)**
>=3	3,086,208	86.6%
>=5	2,104,587	59.1%
>=7	1,383,589	38.8%
Morphine Milligram Equivalent (MME) Daily		
>=90 MME	206,088	5.8%

* Defined as no opioid prescription in the prior 180 days, excluding patients with buprenorphine in CY16.

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

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

Table 4 illustrates a 7.0 percent decrease in the number of unique Florida residents receiving a schedule II-IV controlled substance from 7,387,884 to 6,869,616. The largest decline was for patients who received schedule II controlled substances (8.9 percent from 2,752,942 to 2,509,137), followed by patients receiving schedule II and IV (5.9 percent decrease from 1,383,737 to 1,301,771).

On average, when drugs on a single schedule are prescribed, the average number of prescriptions per person is lower (range: 2.98-4.07) when compared to individuals prescribed drugs in multiple schedules (range: 6.69-16.94).

Table 4. The number of unique Florida residents and average number of prescriptions per person by controlled substance schedule.

Schedule	RY16 (No.)	RY17 (No.)	Change (%)	RY16 (Rx / Pt)	RY17 (Rx / Pt)
Schedule II	2,752,942	2,509,137	-8.9	2.75	2.98
Schedule II and III	112,663	113,289	0.6	6.35	6.69
Schedule II, III, and IV	145,785	145,634	-0.1	16.72	16.94
Schedule II and IV	1,383,737	1,301,771	-5.9	10.27	10.52
Schedule III	402,321	381,752	-5.1	2.92	3.08
Schedule III and IV	153,155	151,378	-1.2	9.05	9.22
Schedule IV	2,437,281	2,266,655	-7.0	3.92	4.07
Total	7,387,884	6,869,616	-7.0	5.01	5.27

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

Table 5 shows there were 36,196,500 prescriptions written by 67,835 prescribers reportedly dispensed to 6,869,616 in-state patients, a 2.3 percent decline. Also, there were 980,714 prescriptions written by 139,877 out-of-state prescribers reportedly dispensed to 443,966 out-of-state patients, a 2.4 percent decline. There has been an overall 2.3 percent decline in the

number of prescriptions reported to the PDMS, a 6.8 percent decline in the number of unique patients' receiving a controlled substance, a 5.9 percent increase in the number of in-state prescribers and a 3.0 percent decline in out-of-state prescribers. The number of prescriptions per patient is 5.1, number of prescriptions per prescriber is 179.0, a 2.1 percent decline from RY16 to RY17, and number of prescriptions per capita, 1.8.

Table 5. The number of prescriptions, unique patients and prescribers by report year and percentage of change.

Data Characteristics	RY14 (No.)	RY14-15 Change (%)	RY15	RY15-16 Change (%)	RY16	RY16-17 Change (%)	RY17
Number of prescriptions to in-state patients	**33,489,309**	**7.3**	**35,929,723**	**3.1**	**37,048,030**	**-2.3**	**36,196,500**
Prescriptions from in-state prescriber (%)	97.9%	6.5	97.3%	2.2	96.4%	-2.9	95.8%
Prescriptions from out-of-state prescriber (%)	2.1%	42.6	2.7%	35.0	3.6%	13.8	4.2%
Number of prescriptions to out-of-state patients	**896,380**	**4.9**	**939,884**	**6.9**	**1,004,617**	**-2.4**	**980,714**
Prescriptions from in-state prescriber (%)	50.2%	14.0	54.5%	8.1	55.2%	-1.5	55.7%
Prescriptions from out-of-state prescriber (%)	49.8%	-4.3	45.5%	5.4	44.8%	-3.4	44.3%
Number of unique patients	**6,664,181**	**15.0**	**7,226,783**	**2.4**	**7,847,122**	**-6.8**	**7,313,582**
Unique in-state patients	6,258,961	15.5	7,226,613	2.2	7,387,884	-7.0	6,869,616
Unique out-of-state patients	405,220	8.6	440,170	4.3	459,238	-3.3	443,966
Number of unique prescribers	**214,710**	**-0.9**	**212,869**	**-2.2**	**208,238**	**-0.3**	**207,712**
Prescribers in-state prescribers	61,156	3.2	63,095	1.5	64,069	5.9	67,835
Prescribers out-of-state prescribers	153,554	-2.5	149,774	-3.7	144,169	-3.0	139,877
Number of prescriptions per patient	**5.2**	**-6.8**	**4.8**	**0.8**	**4.8**	**4.8**	**5.1**
Prescriptions per in-state patients	5.4	-7.1	5.0	0.9	5.0	5.1	5.3
Prescriptions per out-of-state patients	2.2	-3.5	2.1	2.4	2.2	1.0	2.2
Number of prescriptions per prescriber	**160.1**	**8.2**	**173.2**	**5.5**	**182.7**	**-2.1**	**179.0**
Prescriptions per in-state prescriber	543.7	3.4	562.0	0.7	566.2	-8.3	519.4
Prescriptions per out-of-state prescriber	7.4	27.3	9.4	30.9	12.3	12.8	13.9
Number of prescriptions per capita	**1.7**	**5.6**	**1.8**	**1.3**	**1.8**	**-4.0**	**1.8**

C. PERFORMANCE MEASURE: Number of prescriptions and percentage of total prescriptions of the most commonly dispensed controlled substances.

Hydrocodone SA, oxycodone SA and alprazolam were ranked the top three most commonly dispensed controlled substances for a second year in a row, representing 37.2 percent of the total controlled substances dispensed in RY17. Drugs with the largest year-to-year increases in dispensing were amphetamine (10.9 percent) and tramadol SA (5.5 percent). Drugs with the largest year-to-year decreases in dispensing were hydrocodone SA (-6.3 percent) and zolpidem (-6.2 percent).

Table 6. The number of prescriptions and percentage of total prescriptions of the top 10 most commonly dispensed controlled substances to Florida residents.

Drug	Drug Class	RY16		RY17		RY16-17
		No.	%	No.	%	Change* (%)
Hydrocodone SA	O	5,123,070	13.8	4,801,382	13.3	-6.3
Oxycodone SA	O	4,263,901	11.5	4,382,072	12.1	2.8
Alprazolam	B	4,385,815	11.8	4,309,571	11.9	-1.7
Tramadol SA	O	2,763,302	7.5	2,915,113	8.0	5.5
Zolpidem	M	2,397,758	6.5	2,248,047	6.2	-6.2
Clonazepam	B	2,117,128	5.7	2,099,192	5.8	-0.8
Amphetamine	S	1,585,922	4.3	1,759,570	4.9	10.9
Lorazepam	B	1,788,012	4.8	1,730,918	4.8	-3.2
Temazepam	B	1,328,281	3.6	1,360,782	3.8	2.4
Diazepam	B	991,567	2.7	950,517	2.6	-4.1

B=Benzodiazepine, O=Opioid, S=Stimulant, M=Miscellaneous, rank refers to the current reporting period. * Percent change may vary due to ability to identify new products and their associated national drug codes.

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

Figure 3 illustrates prescribing rates (per 1,000 state residents) of three classes of prescription drugs (opioids, stimulants, and benzodiazepines) observed by sex and age group in CY2016. Females are more frequently prescribed opioids, stimulants, and benzodiazepines in all age groups analyzed, except for opioids among patients aged 55-64 years. 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.
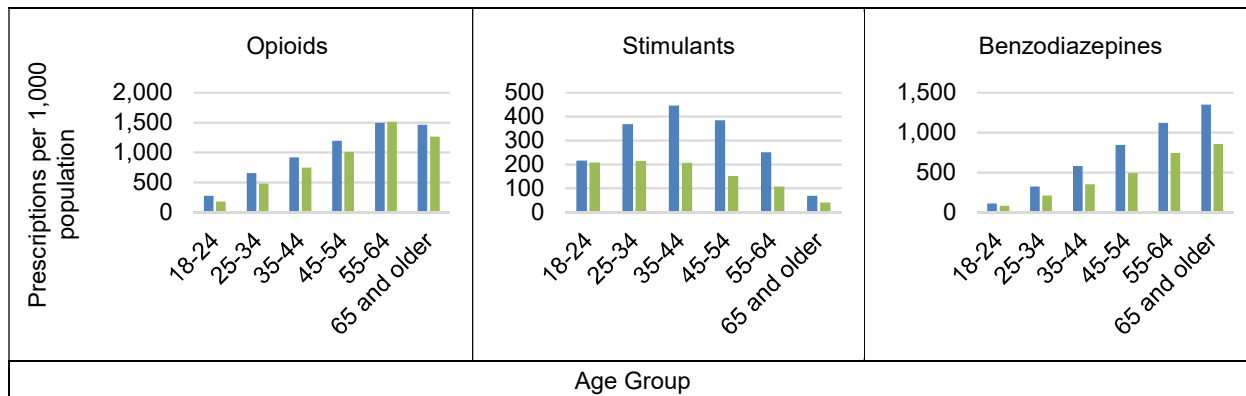
Figure 3. Prescription rates by drug class, sex and age group (females shown in blue), Florida residents, CY2016.

E. PERFORMANCE MEASURE: Prescribing rates per 1,000 population of controlled substances by Florida county.

After ranking and categorizing prescribing rates per 1,000 population, variation by geographic area and drug class is observed. It is beyond the scope of this report to examine the factors associated with this variation, but they may reflect underlying differences in sociodemographics, health care utilization patterns, and other community-level dynamics.
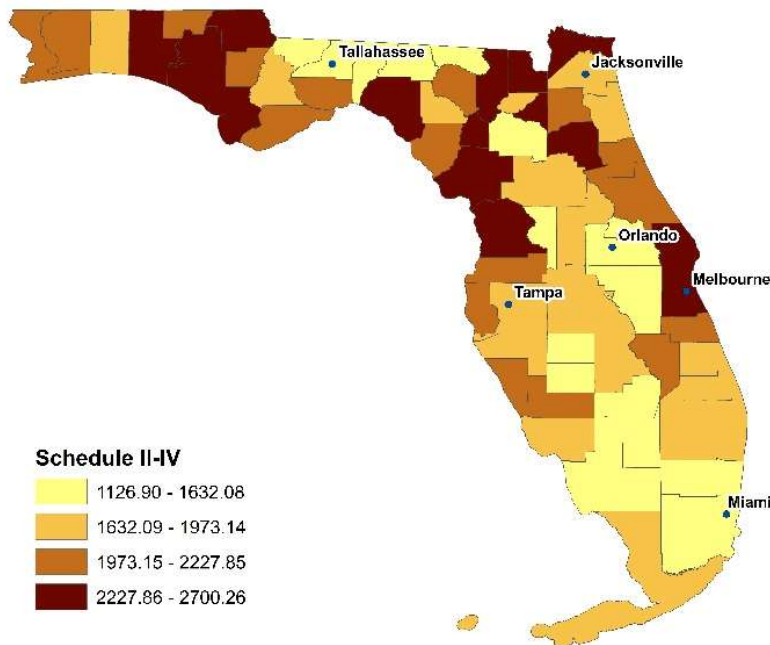

Figure 4(a) Schedule II-IV controlled substance prescribing is highest in the Panhandle, rural areas of north Florida and the Melbourne area.

Figure 4(b) Prescribing rates for opioids, like all schedule II-IV controlled substances, is most concentrated in the Panhandle, rural areas of north Florida and the Melbourne area.

Opioids
	348.52 - 796.87
	796.88 - 988.45
	988.46 - 1144.21
	1144.22 - 1552.00

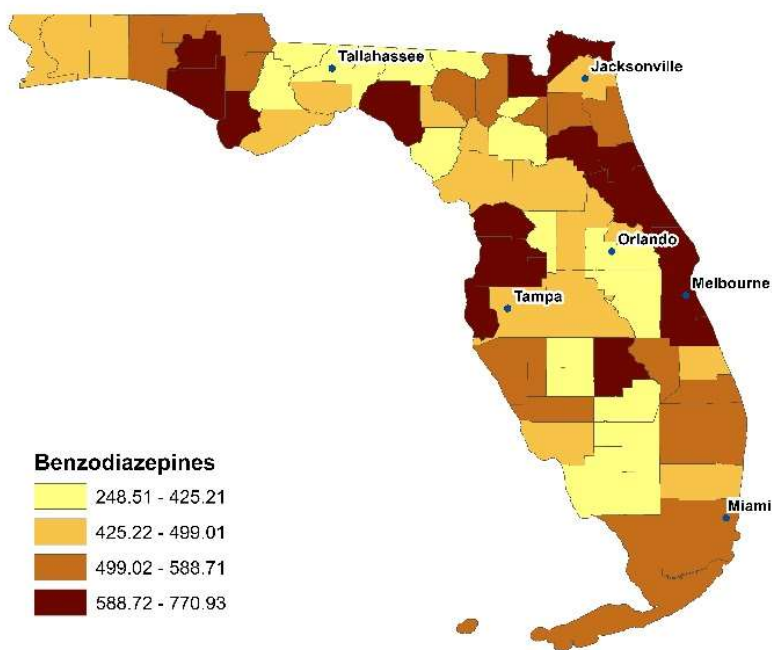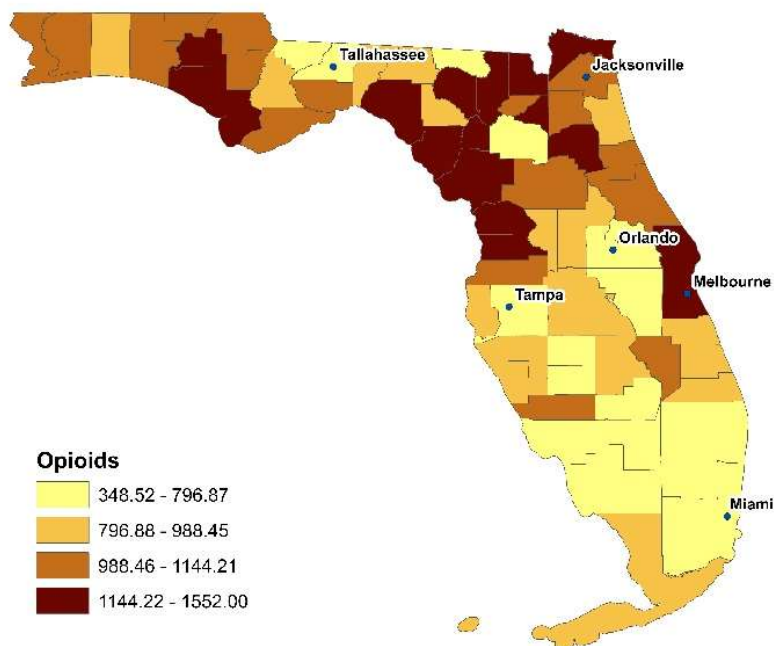**Figure 4(c)** The Melbourne area ranks high in prescribing of both opioids and benzodiazepines. Given the CDC's indication that opioids and benzodiazepines represent a high-risk drug combination,[24] the prescribing trends and pattern in these counties may deserve further examination.

Benzodiazepines
	248.51 - 425.21
	425.22 - 499.01
	499.02 - 588.71
	588.72 - 770.93

Figure 4(d) Unlike the benzodiazepines, high rates of stimulant prescribing tends to be clustered in the Panhandle region.

Figure 4(e) The highest PDMP utilization rates are concentrated in urban areas and near large health systems.

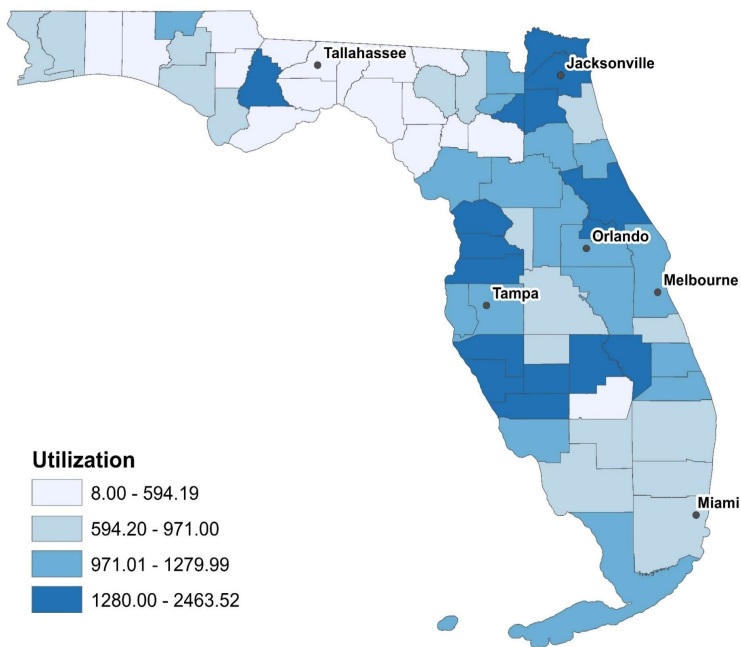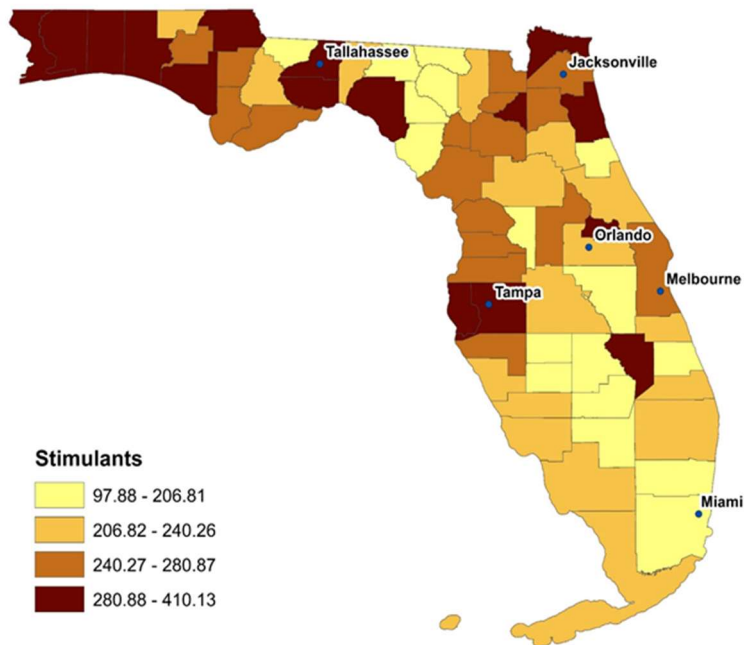**Figure 4(f)** This figure compares the prescribing rate of schedule II-IV controlled substances with PDMP utilization to identify areas of the state where prescribing may be high and PDMP utilization low (represented by the orange squares above). Represented in this quadrant are counties in the Panhandle area (such as Bay, Walton and Washington) and counties in the north central (such as Taylor, Gilchrist and Dixie) which had high prescribing rates but low utilization rates.
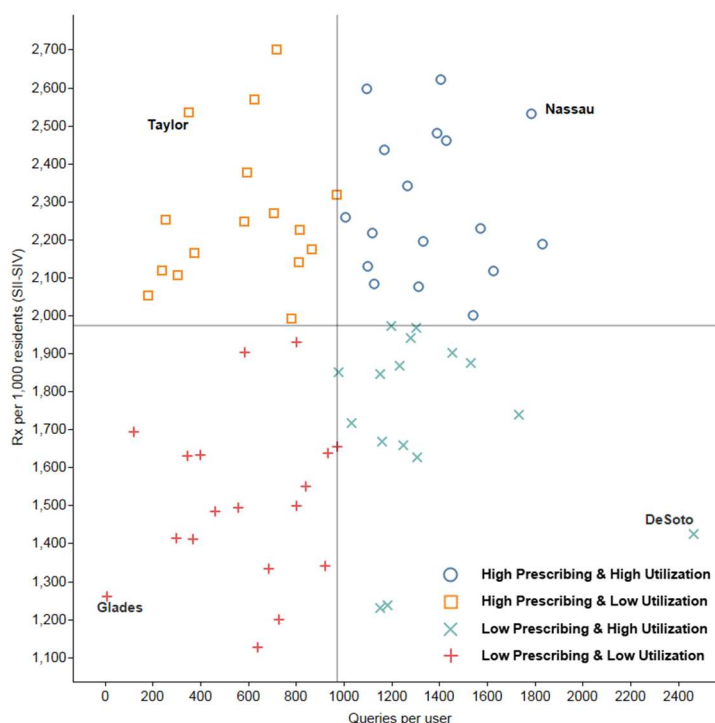

Figure 4. Prescriptions per 1,000 county residents for all controlled substance prescriptions in schedules II – IV (a), opioids (b), stimulants (c), and benzodiazepines (d), PDMP utilization and comparison of prescribing and utilization RY17.

High prescribing and high utilization: Baker, Bradford, Brevard, Charlotte, Citrus, Clay, Flagler, Hernando, Holmes, Levy, Nassau, Okeechobee, Pasco, Pinellas, Putnam, Sarasota and Volusia

High prescribing and low utilization: Bay, Calhoun, Columbia, Dixie, Escambia, Franklin, Gilchrist, Gulf, Indian River, Jackson, Santa Rosa, Suwannee, Taylor, Wakulla, Walton and Washington

Low prescribing and low utilization: Alachua, Broward, Collier, Gadsden, Glades, Hamilton, Hardee, Hendry, Jefferson, Lafayette, Leon, Madison, Miami-Dade, Okaloosa, Palm Beach, Polk, St. Johns and Sumter

Low prescribing and high utilization: DeSoto, Duval, Highlands, Hillsborough, Lake, Lee, Liberty, Manatee, Marion, Martin, Monroe, Orange, Osceola, Seminole, St. Lucie and Union

State Note: The quartiles referenced in Figure 4(f) are the points that divide a ranked set of data values into four equal groups. For more information on controlled substance prescribing rate and PDMP utilization, please go to: http://frost.med.ufl.edu/frost/.

F. PERFORMANCE MEASURE: The number and percentage of unique patients with controlled substance prescriptions paid for by Medicaid and by cash, by year.

As illustrated in Figure 5, there was a 10 percent reduction (297.5 to 268.3) in the number of unique patients with controlled substance prescriptions paid for by Medicaid and cash, by less than 10 days apart within the same quarter, for the same drug, from a different prescriber, and where the number of days' supply for the earlier prescription was greater than the number of days between the prescription fill dates.
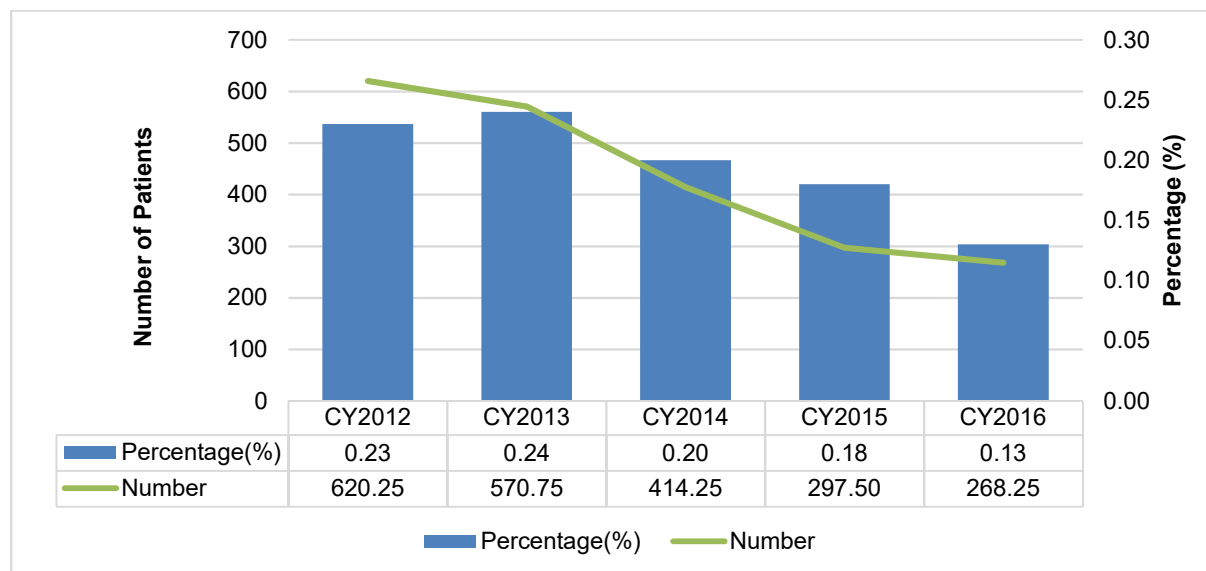

	CY2012	CY2013	CY2014	CY2015	CY2016
Percentage(%)	0.23	0.24	0.20	0.18	0.13
Number	620.25	570.75	414.25	297.50	268.25

Figure 5. Number and percentage of unique patients with controlled substance prescriptions paid for by Medicaid and cash, by year.

3. OUTCOME: Increased coordination among partners participating in the PDMP.

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. Overall, 34,626 (79.3 percent) of the 43,658 registered users have queried the PDMS. Health care practitioner queries increased 30.3 percent from 27,501,266 to 35,834,243, when compared to RY16 (Table 7).

In Florida, allopathic physicians make up 85.0 percent (170) and osteopathic physicians 15.0 percent (30) of the top 200 prescribers of controlled substances; 90.5 percent (181) of the top 200 prescribers have registered to use the PDMS of which 97.8 percent (177) have queried their specific patients' controlled substance histories.

Table 7 illustrates pharmacists have the highest registration (17,852) and utilization rate (16,174, 90.6 percent) and have queried the PDMS 19,757,284 times. All other health care practitioners have queried 16,001,764 times. 10,601 of the 15,034 allopathic physicians registered to use the PDMS have queried 11,653,724 times, a 19.3 percent increase, when compared to RY16.

In an effort to increase utilization of the PDMS, direct access was expanded with passage of SB964 by the 2016 Florida legislature, which authorized health care practitioners to appoint a

designee to access the PDMS on their behalf. Prior to receiving direct access to patient information, a designee must complete a course on information privacy and security and be linked to a supervising practitioner's account. Designee access was implemented on February 14, 2017 and to date, 860 designees have registered, of which 500 have made 75,195 queries.

Table 7. Health care practitioner registration and utilization by license type, report year and percentage change.

License Type	Total Licensees (No.)	Registered Users (No.)	Registered Users (%)	Users who have Queried (No.)	Users who have Queried (%)	RY17 Queries (No.)
ARNP	23,442	3,314	14.1%	2,389	72.1	993,302
DN	13,402	1,064	7.9%	651	61.2	27,962
ME	73,085	15,034	20.6%	10,601	70.5	11,653,724
OPC	3,336	15	0.4%	4	26.7	18
OS	8,217	3,185	38.8%	2,496	78.4	2,607,733
PA	7,846	2,108	26.9%	1,672	79.3	699,277
PO	1,816	226	12.4%	139	61.5	19,748
PS	30,247	17,852	59.0%	16,174	90.6	19,757,284
DEL*	N/A	860	N/A	500	58.1	75,195
TOTAL	161,391	43,658	27.1%	34,626	79.3	35,834,243

ARNP=Advanced Registered Nurse Practitioner; DN=Dentist; ME=Medical Doctor/Allopathic Physician; PC=Certified Optometrist; OS=Osteopathic Physician; PA=Physician Assistant; PO=Podiatric Physician; PS=Pharmacist; DEL=Designee *Designee registration and access began on February 14, 2017.

Certain law enforcement and investigative agencies may request controlled substance prescription information from the program manager during an active investigation related to prescribed controlled substances. Active investigations may involve potential criminal activity, fraud, theft, and other specific crimes related to controlled substances. During the reporting period, law enforcement and investigative agencies have appointed 1,163 authorized users of whom 344 have submitted requests. There has been a 21.0 percent reduction in the number of requests from 6,284 in RY16 to 4,961 (Table 8).

Indirect access to information in the PDMS was expanded with passage of SB964 by the 2016 Florida Legislature, which authorized impaired practitioner consultants to request information regarding their program participants and referrals, upon receiving written approval by the participant or referred individual. Impaired practitioner consultant access was implemented on February 14, 2017 and to date, 2 consultants have submitted 9 requests.

Table 8. Investigative agency registration and utilization by agency type.

Agency	Users that have Queried (No.)	Requests RY16 (No.)	Requests RY17 (No.)	Change (%)
Law Enforcement	339	6,234	4,922	-21.0
Attorney General's Medicaid Fraud Unit	2	40	9	-77.5
Department Investigative Services Unit	1	10	21	110.0
Impaired Practitioner Consultant	2	N/A	9	N/A
TOTAL	344	6,284	4,961	-21.0

B. PERFORMANCE MEASURE: Increased communication with other health care practitioners as a result of using E-FORCSE.

As previously discussed in performance measure 1.B. above, the PDMP and the University of Florida conducted a survey in spring 2016 to gain an understanding of PDMP users' knowledge and attitudes related to the PDMP. Question 27 of the survey asked "As a result of using E-FORCSE, which of the following topics do you communicate MORE about with other health care practitioners?" Figure 6 below provides a summary of the responses to this question and indicates utilization of E-FORCSE increases health care practitioner communication (97% indicated), with doctor shopping, pain management, and safe use of controlled substances ranking highest in specific topics.[25]
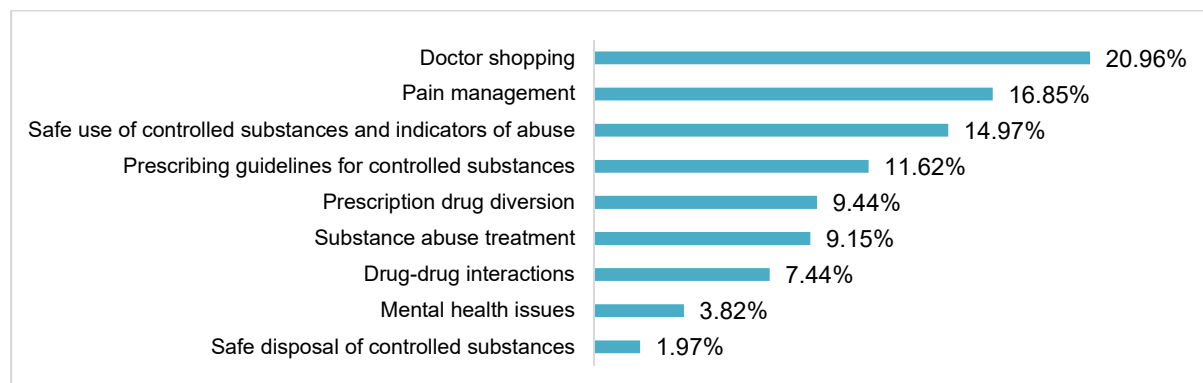

Figure 6. Topics that health care practitioners communicate more with others as a result of using E-FORCSE.

C. PERFORMANCE MEASURE: Multiple provider episode rates based on number of individuals visiting 5/10 number of prescribers and 5/10 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. One common definition of a multiple provider episode (MPE) is patient use of five or more prescribers and five or more pharmacies within three months. Data support that as registration and utilization of E-FORCSE by prescribers and dispensers increases, the number of MPEs decreases.

During January 1, 2011 to March 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 second quarter of 2017 (April 1, 2017 to June 30, 2017), there was a 69.3 percent reduction or 880 individuals visiting more than five prescribers and more than five pharmacies within 90 days (Figure 7). During the same initial period, 105 individuals had one or more prescription drugs prescribed to them by more than 10 prescribers and dispensed at more than 10 pharmacies in a 90-day period. By the end of the second quarter of 2017 (April 1, 2017 to June 30, 2017), there was an 81.0 percent reduction or 20 individuals visiting more than 10 prescribers and more than 10 pharmacies within 90 days (Figure 7).
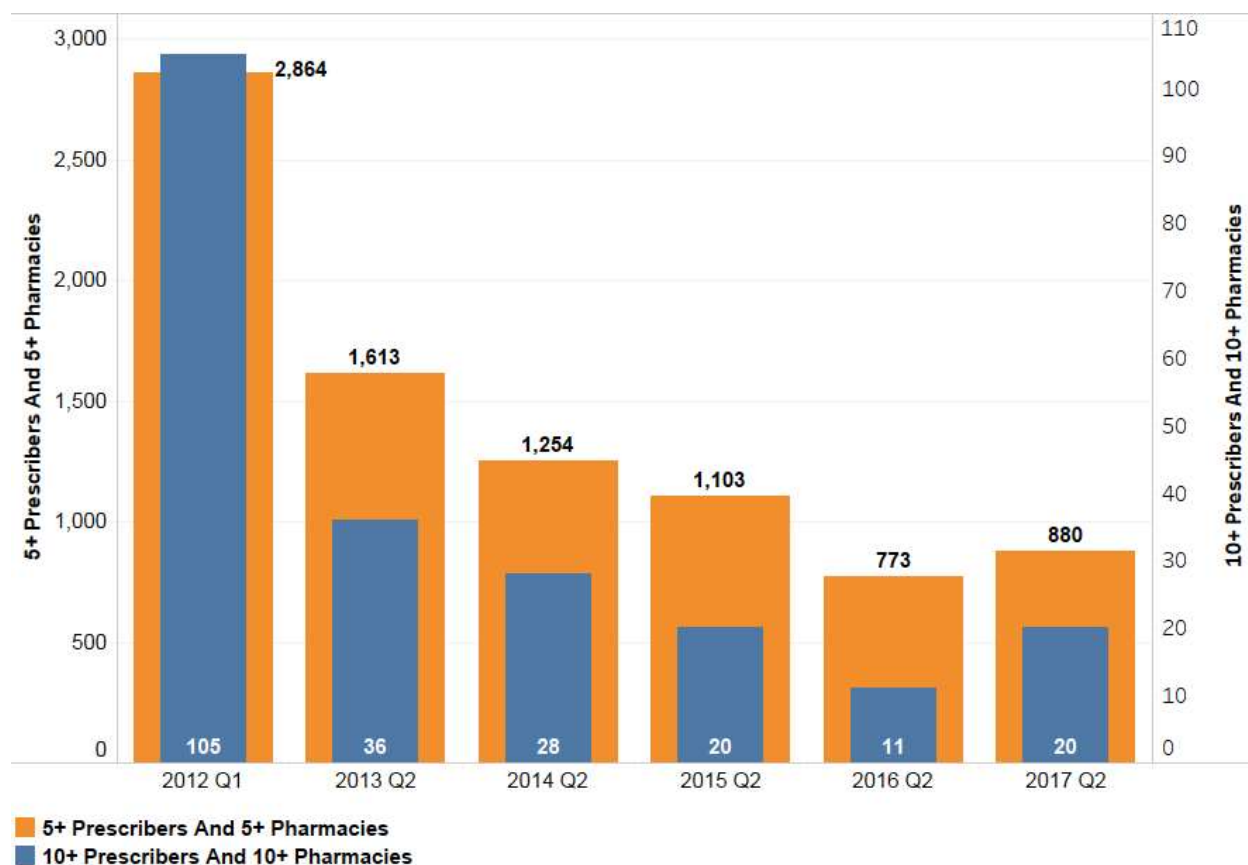

Figure 7. Number of individuals obtaining controlled substance prescriptions in schedules II-IV from 5/10 or more prescribers and 5/10 or more dispensers within a 90-day period, October 2011 to June 2017.

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, the Department has established a long-term collaboration between the PDMP, law enforcement, and the 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; increased the engagement of Florida's public health community in PDMP use via early participation in technical design and development of practitioner metrics; worked 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 developed valid data-driven analytic strategies. This work is being continued through the Department's 2015 Harold Rogers grant in the same category.

    A. PERFORMANCE MEASURE: The number of proactive notification reports sent to prescribers and law enforcement.

To improve patient health and increase patient safety, PDMP staff developed and implemented a proactive reporting program encompassing prescribing practitioners and law enforcement. The goal of the program is to utilize MPE data to provide quarterly notifications for review by the appropriate professional.

Proactive prescriber notifications are designed to educate the prescriber that their patient has exceeded the threshold level of controlled substance prescriptions, as established by Florida Administrative Code. Notification allows the prescriber an opportunity to have a candid conversation with their patient about their chronic pain and treatment options. Proactive law enforcement notifications are designed to educate investigators on situations where individuals may be exploiting communication gaps in the health care environment to obtain multiple controlled substance prescriptions (i.e. MPEs).

During the period of July 1, 2016 and June 30, 2017, PDMP staff provided 217 prescriber proactive notifications and 39 law enforcement proactive notifications (Table 9). These programs have only recently been implemented; therefore, there has not been sufficient time to accumulate definitive outcome results. A thorough evaluation of this new initiative is planned under the University of Florida Harold Rogers Data Driven Multi-Disciplinary Approach to Reducing Prescription Drug Abuse Grant 2016-PM-BX-K005.

Table 9. Proactive notification reports by type, RY16 and RY17, percent change.

Proactive Notification	Reports RY16 (No.)	Reports RY17 (No.)	% Change
Prescriber	225	217	-3.5
Law Enforcement	24	39	62.5
TOTAL	249	256	2.8

Since April 2015, 479 proactive notifications have been sent to health care practitioners. Figure 8 summarizes distribution of the reports by practice setting, which was determined during the clinical review process using information from the E-FORCSE, the Department's licensure verification website and Internet searches. Emergency department/urgent care providers received 42.8 percent (205) of the proactive reports and family medicine/internal medicine providers received 24.0 percent (115) of the proactive reports.
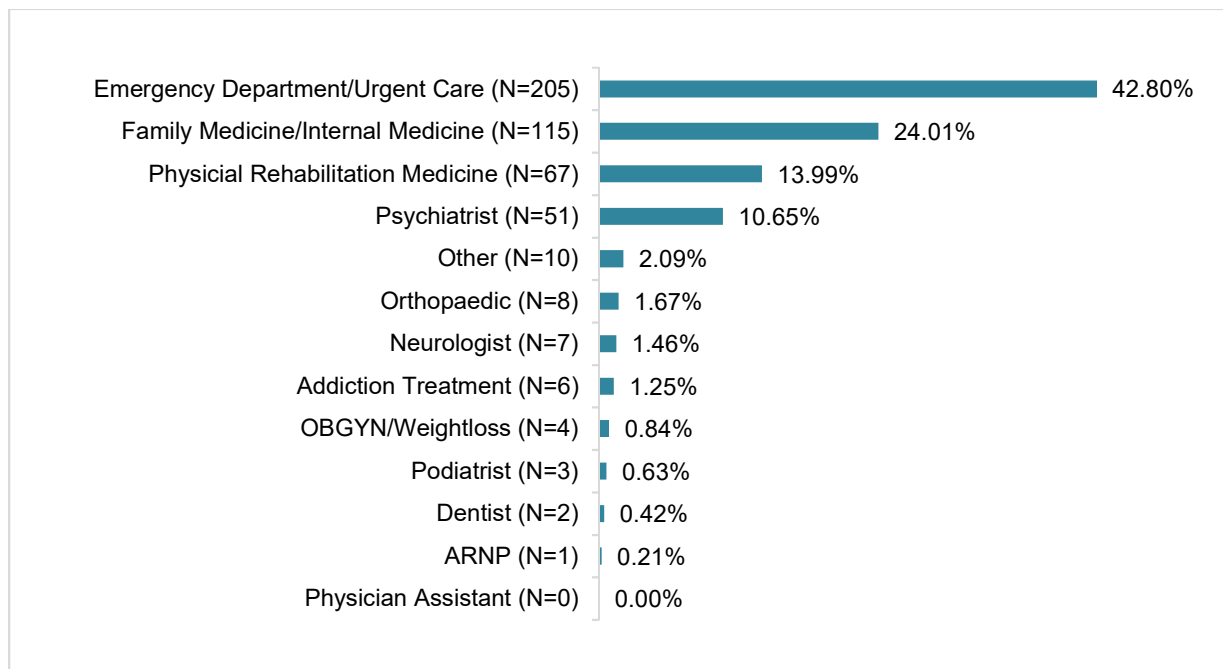
Figure 8. Proactive notification reports by practice type, April 2015 to present.

B. PERFORMANCE MEASURE: The number of medical examiner reports that indicate controlled prescription drug use as the primary or contributing cause of death.

The *Drugs Identified in Deceased Persons by Florida Medical Examiners 2016 Report*[26] (the most recent data available) illustrates that the mortality rate of several commonly tracked substances has increased compared to 2015 including oxycodone, alprazolam, and fentanyl. Figure 9 illustrates the mortality rate (deaths per 100,000 population) for selected drugs by year.
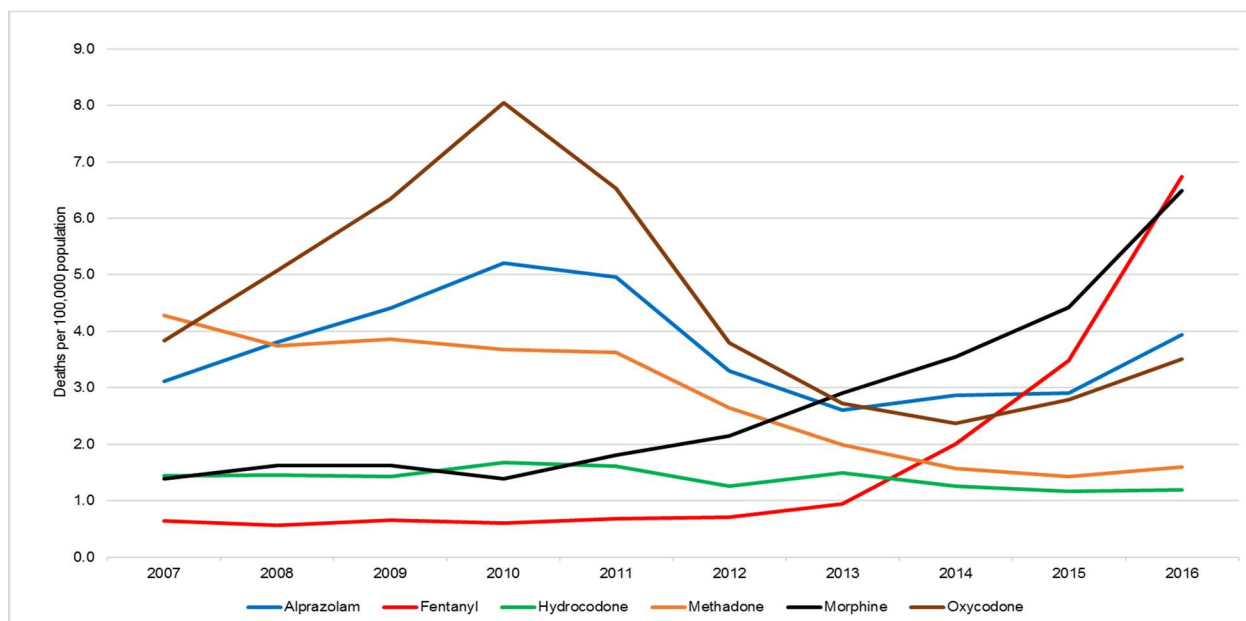

Figure 9. Mortality rate for select drugs from 2007 to 2016.

C. 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 (Figure 10).[27]

The "other opiates" category 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 4,399 in 2007 to 26,974 in 2011. However, since 2011, treatment admissions for this group declined by 79.4 percent (5,563 in 2016). Since 2012, heroin admissions have increased from 2,003 to 4,859 in 2016, a 142.6 percent increase. Alcohol treatment admissions are shown for reference.
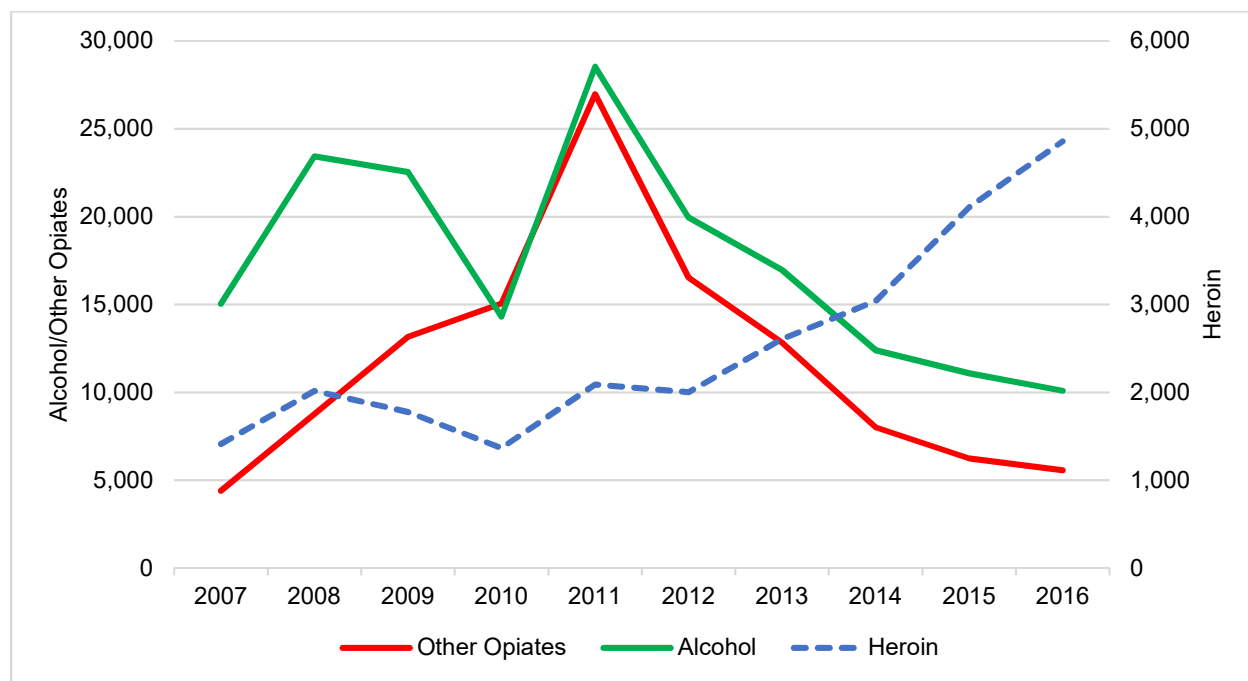

Figure 10. Florida substance abuse treatment admissions, TEDS, 2007-2016.

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

Drug overdose hospitalization was identified using International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) and ICD-10-CM codes.[28-30] The number of discharges from Florida hospitals due to pharmaceutical opioids and benzodiazepines poisoning reached their first peak in Q3 2011 at 1,572 and 1,979 discharges, respectively. This was the same quarter as PDMP implementation. The numbers went down steadily since then but started increasing since Q1 2015. A rise in the number of discharges due to heroin poisoning is apparent in recent years. Since 2014, the number of quarterly discharges for heroin poisonings has increased threefold (Figure 11).
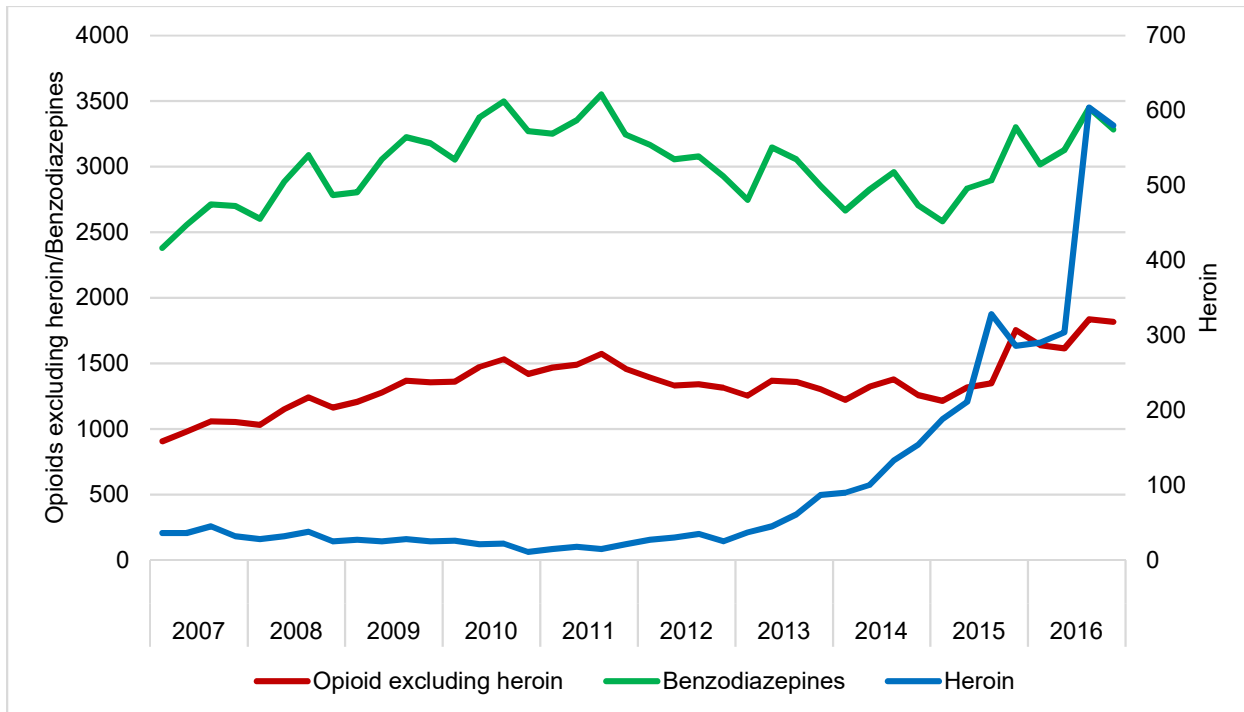
Figure 11. Hospital discharges for drug poisoning in Florida, by substance, Florida Agency for Health Care Administration, 2007 to 2016.

Conclusion

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. A recent survey of E-FORCSE® users found that 87.9 percent of respondents thought the PDMP has been "useful/somewhat useful" for identifying "doctor shopping." Since implementation of the PDMP, there has been a 69 percent decrease in the number of patients receiving prescriptions from five or more prescribers and five or more pharmacies in a 90-day period (Figure 7).

Utilization of E-FORCSE® is not mandatory prior to prescribing or dispensing a controlled substance, however there are currently 43,658 registered health care practitioners and designees and they have requested information from the system 35.8 million times, an increase of 30.3 percent from the prior year. Fifty-nine percent of dispensers (17,852 pharmacists) are registered to view records in the system, 91 percent of whom have consulted the system. Nineteen percent of prescribers are registered and 72 percent have consulted the system.

Increased utilization of E-FORCSE® has resulted in many positive outcomes. Since implementation, there has been a 74.7 percent decrease (Figure 2) in the number of patients receiving concurrent prescriptions of opioid, alprazolam and carisoprodol (OAC), known as the "holy trinity," the reduction of which is viewed as a strategy to improve patient safety.[31]

During RY17, E-FORCSE® observed a 7.0 percent decrease in the number of unique Florida residents receiving a schedule II-IV controlled substance from 7,387,884 to 6,869,616. On average, when drugs on a single schedule are prescribed, the average number of prescriptions per person is lower, when compared to individuals prescribed drugs in multiple schedules (Table 4).

A total of 36,196,500 prescriptions were dispensed to Florida residents in RY17, a 2.3 percent decrease, which were written by 67,835 prescribers. The number of prescriptions dispensed to out-of-state patients also declined from 1,004,617 in RY16 to 980,714 in RY17 (2.4 percent decrease), of which 44.3 percent were written by out-of-state prescribers (Table 5).

A recent study by CDC regarding the characteristics of opioid naïve patients found that the likelihood of chronic opioid use increased with each additional day of medication supplied, beginning with the third day. The study found that the sharpest increases occurred after the fifth and thirty-first day and about one out of five patients became long-term users after receiving a 10-day supply of opioids. There were 3.6 million opioid naïve patients in 2016, of whom 38.8 percent (1,383,589) received a days' supply greater than seven days. Preliminary estimates indicate 206,088 recipients (5.8 percent) may have exceeded the daily MMEs levels recommended by the CDC (Table 3).

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