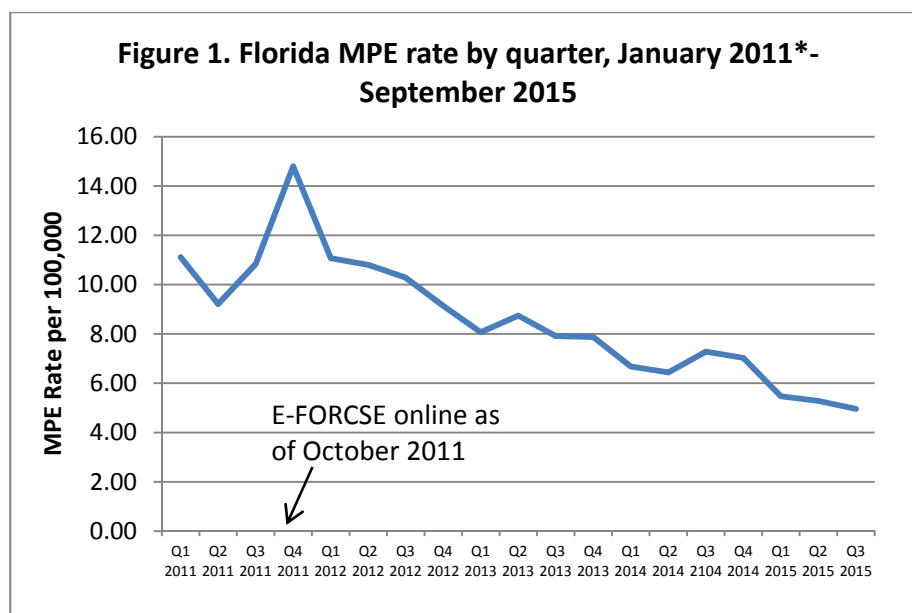


PBSS Data Brief

Decline in Patient Prescription Risk Measures in Florida, 2011-2015

Summary: According to the Centers for Disease Control, the drug overdose death rate in Florida decreased from 15.4 deaths per 100,000 residents in 2011 to 12.6 in 2013, while the rate of overdose deaths attributable to prescription opioids dropped from 8.0 to 5.6.¹ The Florida Medical Examiners Commission reported that from 2012 to 2013 there was an 8.3 percent decline in deaths attributable to prescribed controlled substances.² Information from the Florida Prescription Drug Monitoring Program (E-FORCSE) was used to examine changes in patient risk measures for prescription drugs that are consistent with these declines. The rate of multiple provider episodes (MPEs), a measure of risk for drug misuse, abuse and overdose (sometimes referred to as possible doctor and pharmacy shopping)³ fell 66 percent from the fourth quarter of 2011 (14.8 per 100,000) to the third quarter of 2015 (5.0 per 100,000) (Figure 1). The average daily dose for opioid prescriptions has dropped steadily since 2011 (Figure 2), as has the proportion of patients receiving a dose over 100 morphine milligram equivalents (MME). This is significant since doses over 100 MME are considered a risk factor for overdose and death.⁴ Starting in the fourth quarter of 2011, prescribing rates for several opioids, which had been increasing in prior quarters,⁵ leveled off and in some cases declined (Figures 3a, 3b), while the prescribing rate for buprenorphine, widely used in treating opioid dependence, increased (Figure 3b). These trends are likely attributable, in part, to the establishment of E-FORCSE in 2011, along with adoption of other measures in Florida aimed at reducing prescription drug misuse and diversion. Use of E-FORCSE by medical providers has increased rapidly since its inception,⁶ and a recent study suggests that such use has played a role in reducing prescription drug deaths in Florida.⁷

Figure 1: The quarterly multiple provider episode (MPE) rate³ in Florida for patients prescribed controlled substances in schedules II-IV (shown as rate per 100,000 residents) dropped from 14.8 in the fourth quarter of 2011 to 5.0 in the third quarter of 2015, down 66%.



*Data prior to September 1, 2011 are incomplete as reporting prior to that date was voluntary. Data prior to this date should therefore be interpreted with caution.

About E-FORCSE

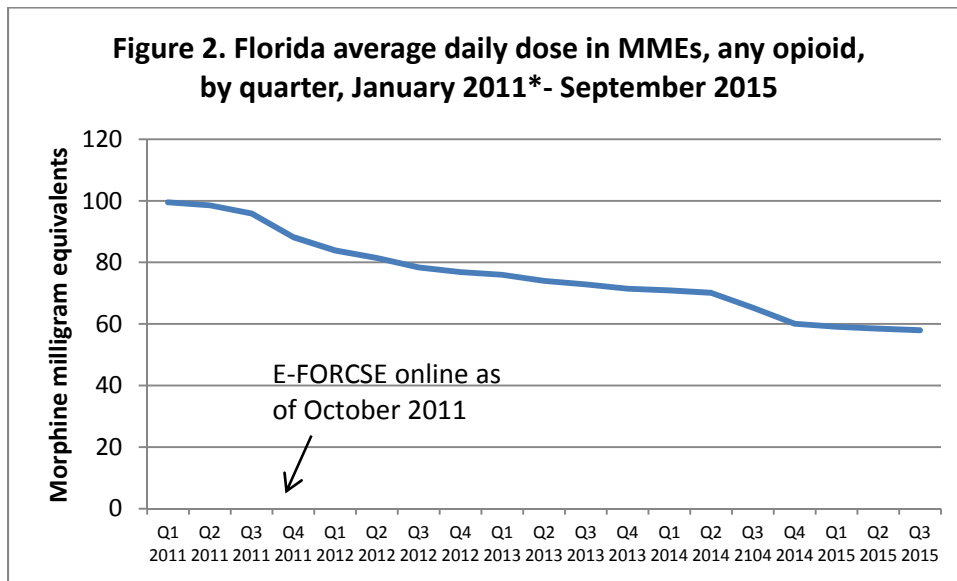
Florida's PDMP, E-FORCSE, became operational in 2011 to encourage safe prescribing and reduce drug abuse and diversion. It is one of 12 PDMPs currently participating in PBSS. For more information visit www.e-forcse.com

About PBSS

The Prescription Behavior Surveillance System (PBSS) provides epidemiological analyses of de-identified data from state prescription drug monitoring programs to help target and evaluate interventions aimed at reducing prescription drug abuse and diversion. For further information, see the PBSS webpage at <http://www.pdmpexcellence.org/>.

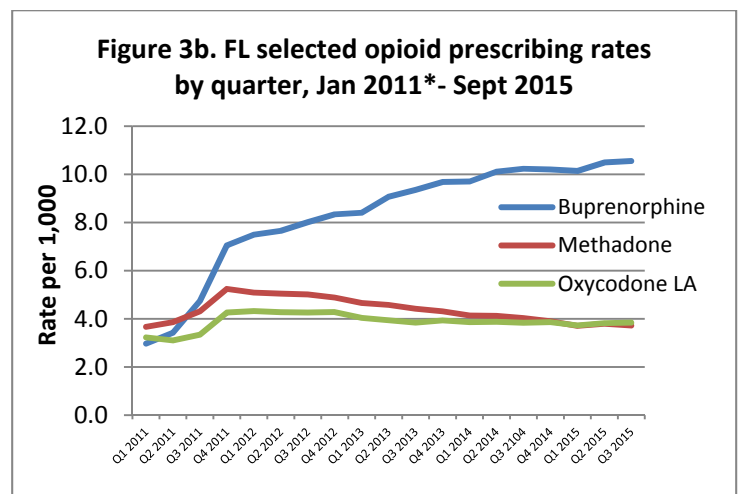
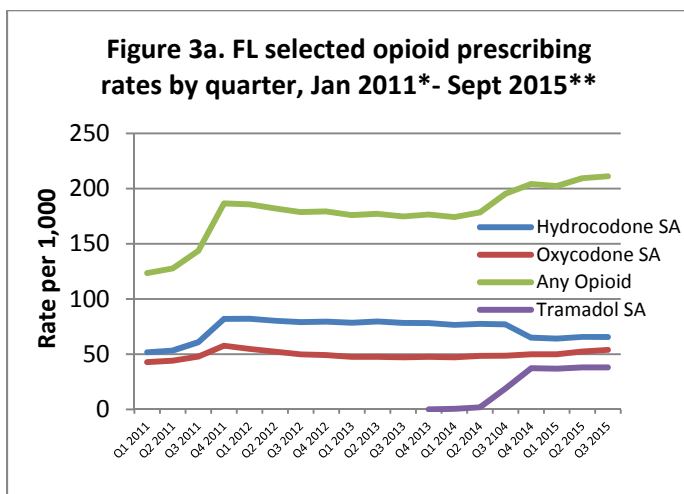
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Figure 2: From the fourth quarter of 2011 to the third quarter of 2015, the average daily dose for opioid prescriptions, measured in morphine milligram equivalents (MMEs), dropped from 88.2 to 58.0, a 34 percent decline. The percent of patients prescribed opioids who received a daily dose over 100 MME (a risk factor for overdose) declined from 17.7 percent to 7.1 percent over this period (data not shown).



*Data prior to September 1, 2011 are incomplete as reporting prior to that date was voluntary. Data prior to this date should therefore be interpreted with caution.

Figures 3a and 3b: Starting in the fourth quarter of 2011, prescribing rates for several opioids, which had been increasing in prior quarters,⁵ leveled off and in some cases declined (SA= short acting, LA=long acting).⁸ However, prescribing for buprenorphine increased (Figure 3b), suggestive of an increase in those seeking treatment for opioid addiction.



*Data prior to September 1, 2011 are incomplete as reporting prior to that date was voluntary. Data prior to this date should therefore be interpreted with caution.

**See endnote 8 concerning scheduling changes for tramadol and hydrocodone affecting trends shown in this figure.

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This Data Brief is a joint publication of PBSS, Brandeis University and E-FORCSE, the Florida Department of Health. It can be accessed online at <http://www.floridahealth.gov/statistics-and-data/e-forcse/news-reports/index.html>.

Endnotes

¹ Centers for Disease Control and Prevention, National Center for Health Statistics. Multiple Cause of Death 1999-2013 on CDC WONDER Online Database, released 2015. Accessed at <http://wonder.cdc.gov/mcdicd10.html> on Apr 6, 2015.

² Florida Medical Examiner's Commission. Drugs Identified in Deceased Persons, Annual Report 2013. Florida Department of Law Enforcement, Medical Examiner's Commission, October 2014. <http://www.fdle.state.fl.us/Content/getdoc/05c6ff97-00cc-49b2-9ca5-5dadcd4539b1a/2013-Annual-DrugReport.aspx>

³ A multiple provider episode is defined for this report as use of 5 or more prescribers and 5 or more pharmacies within 3 months. Rates are calculated by drug class for those receiving a prescription in the drug class and are averaged over 4 quarters to obtain an annual rate. Note that the threshold used here was assigned by PBSS for the purpose of obtaining population estimates only; an individual engaged in multiple provider episodes is not necessarily engaged in doctor/pharmacy shopping.

⁴ Dunn, Kate M., Kathleen W. Saunders, Carolyn M. Rutter, Caleb J. Banta-Green, Joseph O. Merrill, Mark D. Sullivan, Constance M. Weisner, et al. "Opioid Prescriptions for Chronic Pain and Overdose: A Cohort Study." *Annals of Internal Medicine* 152, no. 2 (January 19, 2010): 85–92. doi:10.7326/0003-4819-152-2-201001190-00006.

⁵ Data prior to September 1, 2011 are incomplete as reporting prior to that date was voluntary, so should be interpreted with caution.

⁶ 2013-2014 Prescription Drug Monitoring Program Annual Report, December 1, 2014, E-FORCSE, Florida Department of Health, <http://www.floridahealth.gov/statistics-and-data/e-forcse/news-reports/2014-pdmp-annual-report-final.pdf>.

⁷ Delcher et al. "Abrupt Decline in Oxycodone-caused Mortality after Implementation of Florida's Prescription Drug Monitoring Program," *Drug Alcohol Depend.* 2015 May 1;150:63-8. doi: 10.1016/j.drugalcdep.2015.02.010. Epub 2015 Feb 19

⁸ In early 2014, tramadol was scheduled as a Schedule IV controlled substance in Florida, which largely accounts for the increase in prescribing of "any opioids" starting in 2014 (Figure 3a). In August 2014, the DEA rescheduled hydrocodone combination products (e.g., Vicodin) from Schedule III to Schedule II, which likely accounts for the drop in hydrocodone SA prescribing observed in the second half of 2014 (Figure 3a).