



**PBSS Data Brief**

**Patient Risk Measures for Controlled Substance Prescriptions in West Virginia, 2010-2014**

**Summary:** The overdose death rate in West Virginia rose sharply from 12.4 per 100,000 residents in 2009 to 36.3 in 2011, then declined slightly to 32.2 in 2013. Of the 570 overdose deaths in 2013, 414 (73%) involved prescription opioids.<sup>1</sup> Data from West Virginia’s Prescription Drug Monitoring Program<sup>2</sup> show that recent prescription rates for opioids, benzodiazepines and stimulants in West Virginia have risen (Figure 1), while rates for opioids and benzodiazepines were above the mean for seven other states participating in the Prescription Behavior Surveillance System (PBSS).<sup>3</sup> However, 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), dropped substantially, while the prescribing rate for buprenorphine (used in the treatment of opioid dependence) quadrupled (Figure 2). While declines were observed in the percentage of prescriptions involved with MPEs in all three drug categories, the decline was most pronounced for opioids (Figure 3). West Virginia required all practitioners who prescribe C-II, III and IV controlled substances to have PDMP access beginning July 2011<sup>4</sup>. Effective as of June 2012, West Virginia adopted requirements that medical providers access the PDMP when prescribing or dispensing controlled substances in certain circumstances,<sup>5</sup> and during the following year laws regulating pain clinics became operational. These policies may have contributed to the decline in MPEs after the second quarter of 2012 and an increase in prescribing of buprenorphine for opioid addiction treatment.

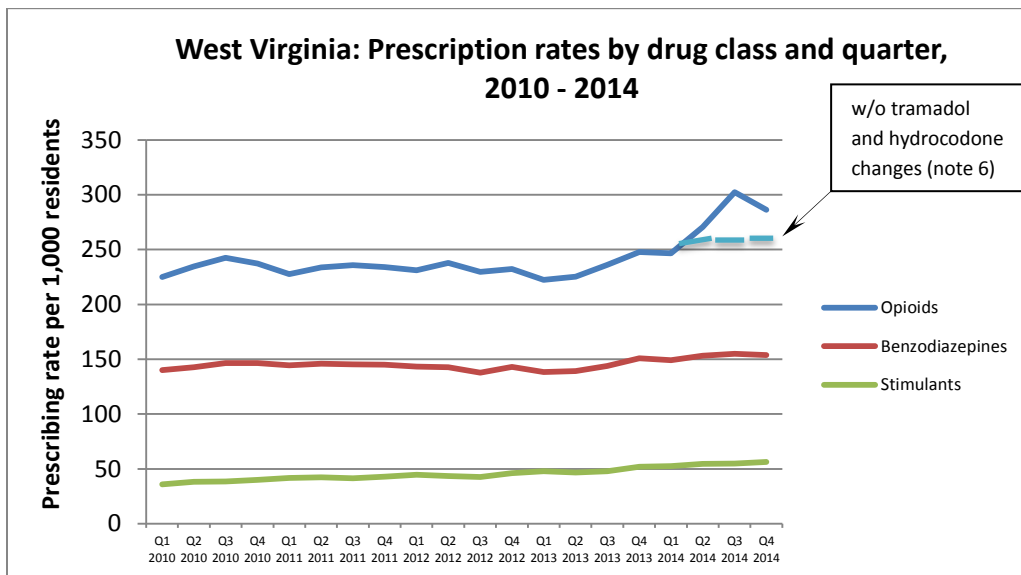
**Figure 1:** Quarterly prescription rates for stimulants in West Virginia rose gradually from 2010 to 2014, while the rate for benzodiazepines increased slightly starting in the second quarter of 2013, and substantially for opioids in 2014 due to the scheduling of tramadol<sup>6</sup> (rates per 1,000 residents). In 2014, the *annual* prescription rates for opioids (1,106) and benzodiazepines (611) in West Virginia were above the unweighted mean of rates for PBSS states<sup>7</sup> (922 and 469 respectively), while the annual prescription rate for stimulants (218) was below the mean for PBSS states (282) (data not shown).

**WV CSMP Website:**

<https://www.csapp.wv.gov>

**WV Board of Pharmacy Website:**

<https://www.wvbop.com>

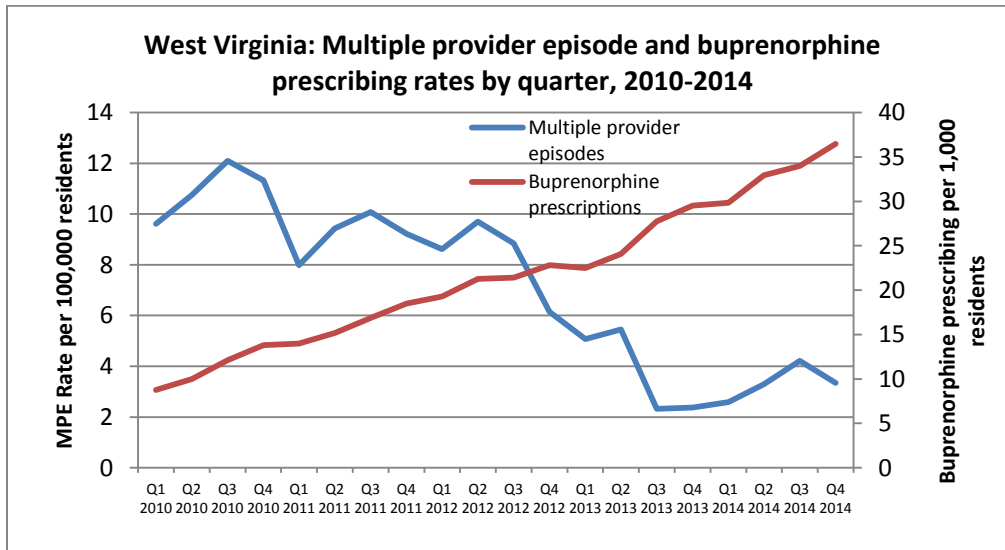


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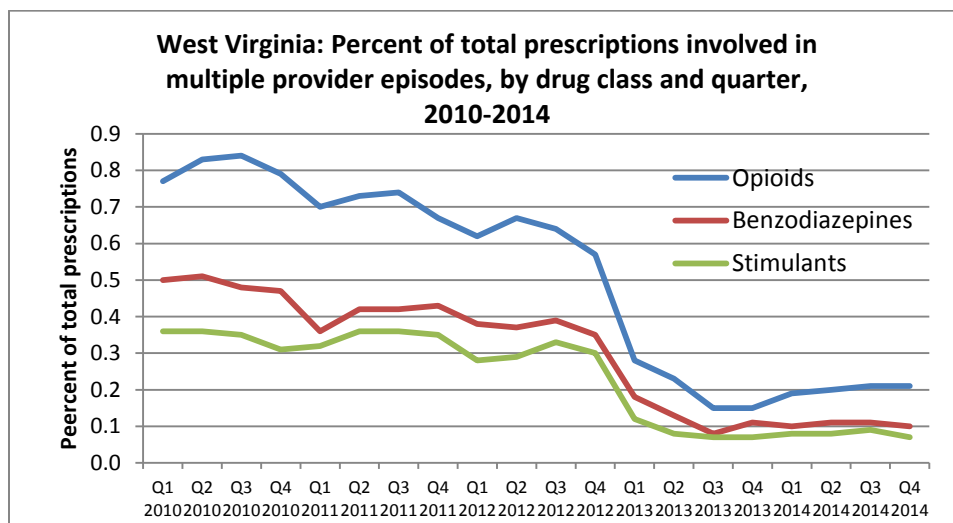
The Prescription Behavior Surveillance System (PBSS) provides epidemiological analyses of de-identified data from state prescription drug monitoring programs to help target and evaluate interventions aimed at reducing prescription drug abuse and diversion. For further information, see the PBSS webpage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

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**Figure 2:** The multiple provider episode (MPE) rate<sup>8</sup> for patients prescribed controlled substances in schedules II-IV (shown as rate per 100,000 residents) dropped from 9.6 in the first quarter of 2010 to 3.4 in the fourth quarter of 2014, a 65% decline. Over the same period, the rate of prescribing for buprenorphine, used in medically assisted treatment of opioid addiction, quadrupled, rising from 8.8 to 36.5 (shown as rate per 1,000 residents).



**Figure 3:** From 2010 to the fourth quarter of 2013, declines were observed in the percentage of prescriptions for the three major classes of controlled substances that were involved with multiple provider episodes in West Virginia. These percentages dropped most sharply in 2013, then stabilized at .02 percent and under. Although the decline was greatest for opioids, opioids remain the drug class most frequently associated with multiple provider episodes.



This Data Brief is a joint publication of PBSS, Brandeis University and the West Virginia PMP, West Virginia Board of Pharmacy. It can be accessed online at <http://www.pdmpexcellence.org/content/data-briefs>.

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## Endnotes

<sup>1</sup> 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.

<sup>2</sup> West Virginia's PDMP is the WV Controlled Substances Monitoring Program (WV CSMP), see <https://www.csapp.wv.gov>.

<sup>3</sup> For information on the Prescription Behavior Surveillance System, see the PBSS webpage at [www.pdmpexcellence.org](http://www.pdmpexcellence.org).

<sup>4</sup> W. Va. Code § 60A-9-5(e), effective July 9, 2010, provides that all practitioners who prescribe schedule II, III or IV controlled substances shall, on or before July 1, 2011, have online or other form of electronic access to the WV Controlled Substances Monitoring Program database. <http://www.legis.state.wv.us/wvcode/ChapterEntire.cfm?chap=60a&art=9&section=5#09>.

<sup>5</sup> W. Va. Code § 60A-9-5a(a), effective June 8, 2012, provides that upon initially prescribing or dispensing any pain-relieving substance for a patient and at least annually thereafter should the prescriber or dispenser continue to treat the patient with controlled substances, all persons with prescriptive or dispensing authority and in possession of a valid Drug Enforcement Administration registration identification number and licensed by the Board of Medicine shall access the West Virginia Controlled Substances Monitoring Program database for information regarding specific patients for whom they are providing pain-relieving controlled substances as part of a course of treatment for chronic, nonmalignant pain but who are not suffering from a terminal illness, and that the inquiry and information obtained from such accessing shall be documented in the patient's medical record. <http://www.legis.state.wv.us/wvcode/ChapterEntire.cfm?chap=60a&art=9&section=5A#09>

<sup>6</sup> Effective June 6, 2014, West Virginia classified the opioid tramadol as a Schedule IV controlled substance, thus increasing the number of opioid prescriptions reported by dispensers, see

[https://www.nabp.net/system/rich/rich\\_files/rich\\_files/000/000/392/original/wv062014.pdf](https://www.nabp.net/system/rich/rich_files/rich_files/000/000/392/original/wv062014.pdf). In Q3 and Q4 of 2014, tramadol accounted for 44.35 and 45.50 prescriptions per 1,000 residents, respectively. In August, 2014, the DEA rescheduled hydrocodone combination products (e.g., Vicodin) from Schedule III to Schedule II. This rescheduling was associated with a decrease, from Q3 to Q4 of 2014, from 140.0 to 115.1 prescriptions per 1,000 residents. Thus, the net effect of these schedule changes was an increase in total opioid prescriptions per 1,000 residents of approximately 44 in Q3 of 2014, and of approximately 20 in Q4. The dotted line in Chart 1 suggests what opioid prescribing might have been absent these changes.

<sup>7</sup> PBSS states included are DE, FL, ID, LA, ME, and OH. PBSS states, and therefore, their combined prescription rates, are not necessarily representative of the U.S. as a whole.

<sup>8</sup> 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