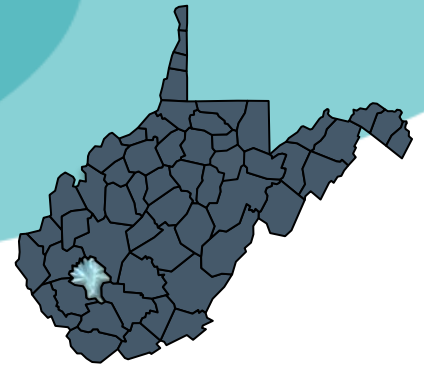
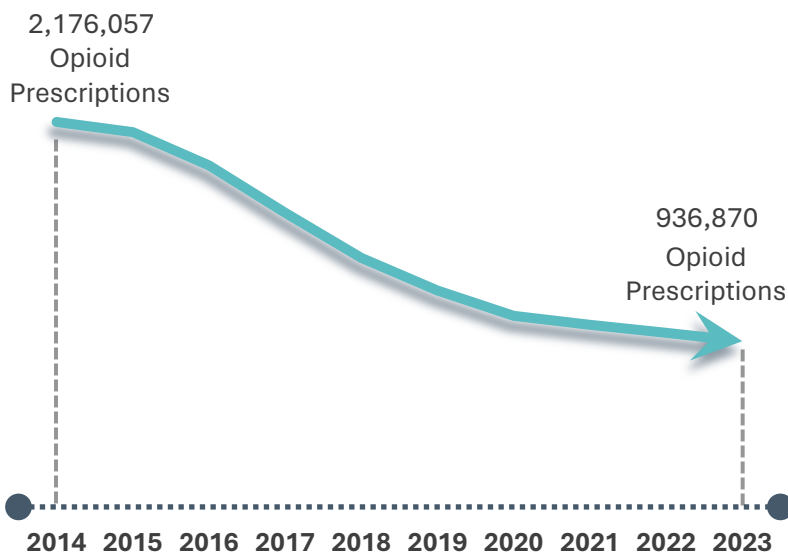


West Virginia Board of Pharmacy Prescription Opioid Indicators Report

Boone County 2023



Within the West Virginia Department of Health (DH) Bureau for Public Health, the West Virginia Violence and Injury Prevention Program (WV VIPP), in collaboration with the West Virginia Board of Pharmacy, under the direction of the Centers for Disease Control and Prevention (CDC), continues to work to address prescription drug misuse, diversion, and overdose within the state of West Virginia. Prescription drug overdose continues to be a major issue in West Virginia. Preliminary data from DH's Health Statistics Center shows that in 2022, more than 1,400 people died in association with drug misuse (including prescription and illicit drugs) with a rate of 86.1 per 100,000 population. This is over two and a half times the national average. To help combat this epidemic, CDC provided specific opioid prescribing indicators to identify high-risk areas within the state to allow for intervention and community education.



Source: West Virginia Controlled Substance Monitoring Program

Since 2014, there has been a **57% decrease** in the number of opioids dispensed in West Virginia.

Nearly **5 million** fewer doses were dispensed in 2023 than in 2022.

Indicator 1: Number and rate of opioid analgesics per 1,000 state residents

This indicator includes all opioid prescriptions that are classified as Schedule II, III, IV, or V. The figures below show the total number of opioid prescriptions for Boone County and the rate per 1,000 population compared to the state. Population estimates were obtained from US Census data.

Figure 1

Number of Opioid Analgesics Dispensed, Boone County, 2014-2023

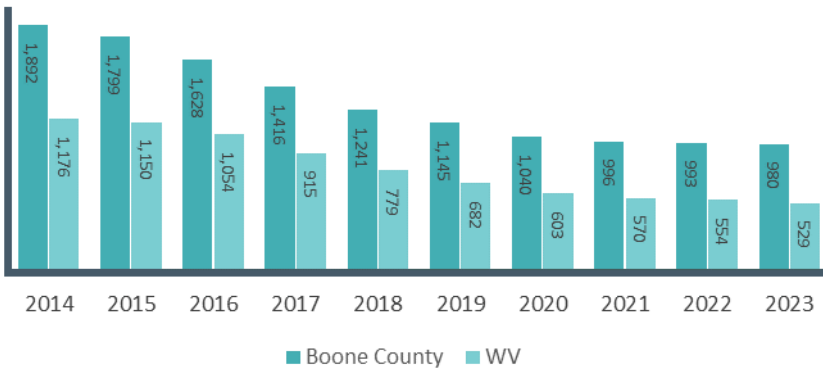
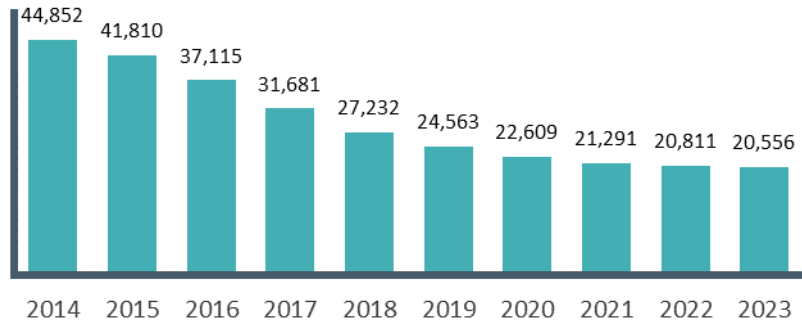


Figure 2

Rate of Opioid Analgesics per 1,000 Population in Boone County and West Virginia, 2014-2023

What does this mean?

This indicator is important because it provides information about prescription opioid use for each county. This data will help determine areas where high prescribing/dispensing are occurring around the state and allow for education on responsible opioid prescribing. High rates of opioid dispensing mean there are large quantities of opioids that are out in the community. Positively, there was an overall decrease in both the rate and number of opioids being prescribed in Boone County and in West Virginia from 2014-2023.

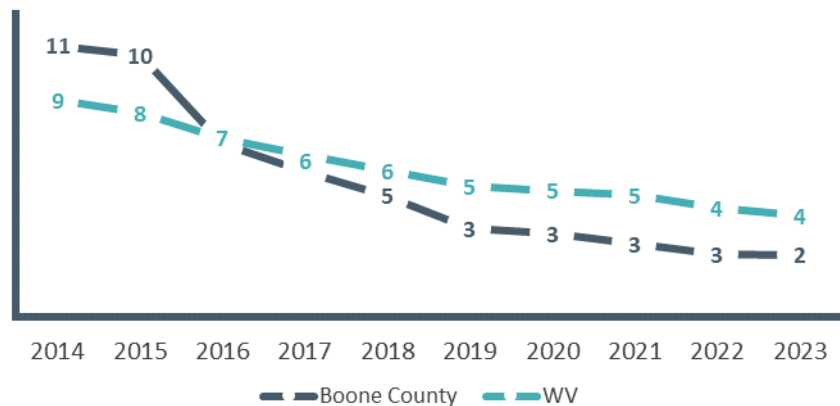
Indicator 2: Percent of patients receiving more than an average daily dose of 90 morphine milligram equivalents (MME)

This indicator shows the total average daily dose of MMEs that a patient is taking. It includes all opioid prescriptions that are classified as Schedule II, III, IV, or V. MMEs are used as a measure to describe the potency of an opioid. Calculating MMEs is important to determine which patients may be at risk for an overdose. The figure below shows the percentage of patients with greater than an average daily dose of 90 MMEs in Boone County compared to the state during 2014-2023.

**Note that the MME conversion factors for fentanyl, hydromorphone, methadone, and tramadol were updated in the 2022 Opioid Prescribing Guidelines in November 2022.*

Figure 3

Percent of Patients Receiving More than an Average Daily Dose of 90 MME, Boone County and WV, 2014-2023



What does this mean?

This indicator is important because it provides information for prescribers about how much morphine equivalent drug the patient is receiving. MMEs help determine the amount of morphine an opioid dose is equal to when prescribed, often used as a gauge of the misuse and overdose potential of the amount of opioid that is being given at a particular time. It is also a useful tool to identify high-burden areas in the state, which is important for public health surveillance at the county level. From 2014-2023, the percentage of patients receiving more than an average daily dose of 90 MMEs has decreased steadily for both West Virginia and Boone County.

Indicator 3: Rate of multiple provider episodes for prescription opioids (5 or more prescribers and 5 or more pharmacies in a 6-month period) per 100,000 residents

This indicator shows the rate of patients who went to five or more prescribers and five or more pharmacies within a six-month period, or multiple provider episode (MPE). The rate is calculated per 100,000 population. It includes all opioid prescriptions that are classified as Schedule II, III, IV, or V.

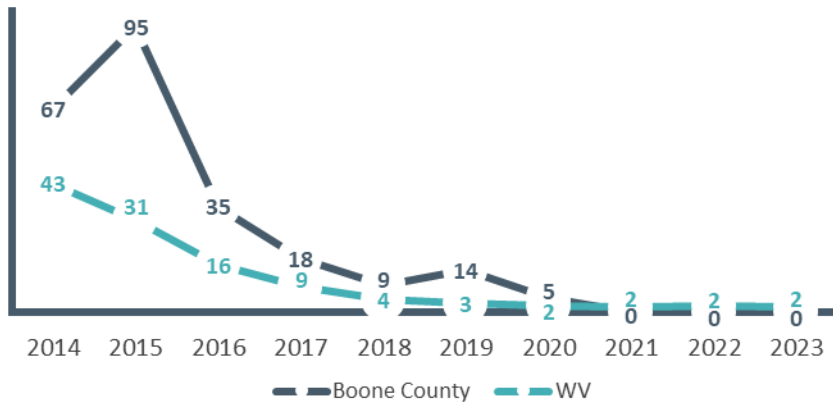


Figure 4

Rate of Multiple Provider Episodes (MPE) for Prescription Opioids per 100,000 Population, Boone County and WV, 2014-2023

What does this mean?

This indicator is important because it provides valuable information on prescription filling behaviors. Patients who receive prescriptions from more than five doctors and who fill at more than five pharmacies are at greater risk of drug overdose. This indicator helps determine patients who may have drug-seeking habits (i.e., “doctor shopping”). From 2014-2023, West Virginia and Boone County have had a considerable decrease in the rate of patients who qualified as having an MPE. Boone County has had no cases of MPEs during the past three years.

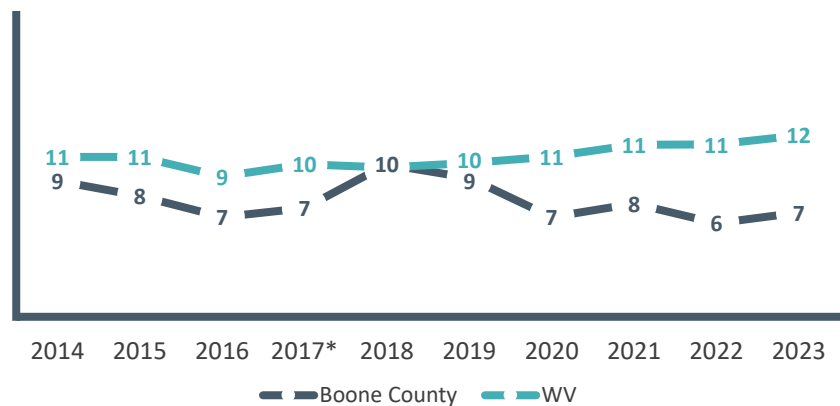
Indicator 4: Percent of patients prescribed long-acting/extended-release opioids who were opioid-naïve

This indicator represents the percentage of patients with no prescribed opioid prescriptions in the previous 45 days* who were prescribed at least one long acting/extended release (LA/ER) opioid, among all patients with LA/ER opioid prescriptions. It includes all opioid prescriptions that are classified as Schedule II, III, IV, or V.

*Note that CDC changed the definition of “opioid-naïve” from 60 days to 45 days in 2017.

Figure 5

Percent of Opioid-Naïve Patients among Patients Prescribed LA/ER Opioids, Boone County, 2014-2023



What does this mean?

This indicator is important to understand because it provides information about individuals who are not accustomed to opioid medications, which may potentially increase the risk of opioid dependence, misuse, or overdose. CDC opioid prescribing guidelines recommend using immediate release (IR) opioids before taking long acting or extended-release opioids. From 2014-2023, Boone County had an overall decrease in patients who were opioid-naïve and prescribed LA/ER opioids despite the increase during 2017 and 2018.

Indicator 5: Percent of patient prescription days with overlapping opioid prescriptions

This indicator shows the percentage of days in which more than one prescribed opioid prescription during the same period was dispensed, among all prescription days. It includes all opioid prescriptions that are classified as Schedule II, III, IV, or V.

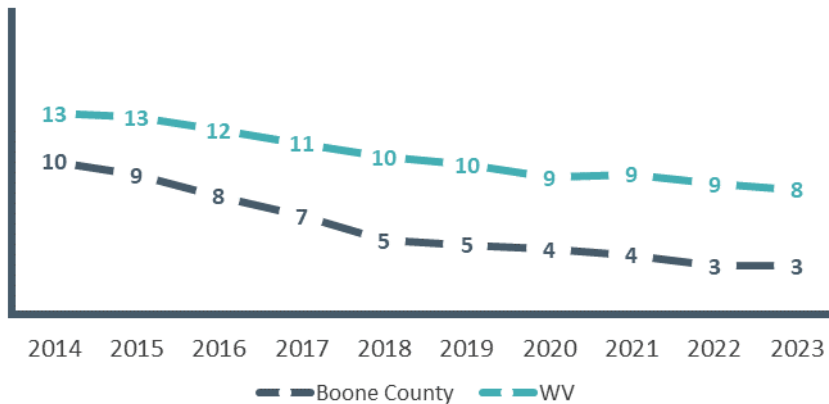


Figure 6

Percent of Patient Prescribed Days Overlap Between Opioid Analgesics, Boone County and WV, 2014-2022

What does this mean?

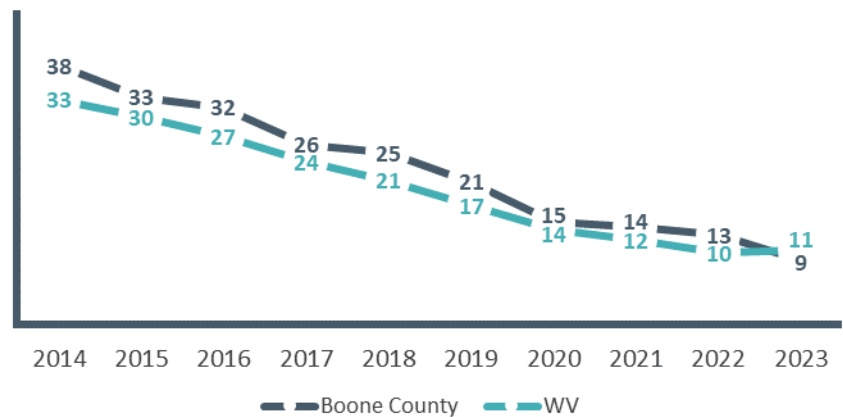
This indicator represents patients who may potentially be using their opioid prescriptions not as prescribed or may show areas where drug diversion is occurring. Using multiple opioid prescriptions during the same period increases the risk for drug dependency and overdose. It is important to understand this because a considerable number of drug overdose deaths include more than one opioid. From 2014-2023, Boone County had a lower percentage of prescription overlap compared to the state average. Additionally, there has been a steady decrease at both the county and state level since 2014.

Indicator 6: Percent of patient prescription days with overlapping opioid and benzodiazepine prescriptions

This indicator represents the percentage of patients who had an opioid and a benzodiazepine (i.e., Alprazolam, Lorazepam, Diazepam) prescription on the same day among all opioid prescription days. It includes all opioid prescriptions that are classified as Schedule II, III, IV, or V and benzodiazepines.

Figure 7

Percent of Patient Prescribed Opioid Days that Overlap with Benzodiazepine Prescriptions, Boone County and WV, 2014-2023



What does this mean?

This indicator is important because it shows areas in the state where patients are using both opioids and benzodiazepine drugs at the same time. Taking an opioid with a benzodiazepine increases the risk for drug overdose and death, as both classes of medication depress the central nervous system. From 2014-2022, Boone County had a higher percentage of days where there was an overlapping opioid and benzodiazepine prescription than the state average, though was slightly lower than the state in 2023. Additionally, there has been a steady decrease at both the county and state level since 2014.

County Rankings by Indicator

| Patient County | Indicator 1 | Indicator 2 | Indicator 3 | Indicator 4 | Indicator 5 | Indicator 6 |
|----------------|-------------|-------------|-------------|-------------|-------------|-------------|
| BARBOUR | 26 | 17 | 15 | 40 | 22 | 39 |
| BERKELEY | 44 | 5 | 4 | 41 | 2 | 43 |
| BOONE | 2 | 50 | 15 | 25 | 52 | 9 |
| BRAXTON | 34 | 15 | 15 | 34 | 10 | 33 |
| BROOKE | 42 | 27 | 15 | 1 | 6 | 33 |
| CABELL | 10 | 42 | 14 | 7 | 35 | 5 |
| CALHOUN | 17 | 46 | 15 | 5 | 46 | 27 |
| CLAY | 5 | 30 | 15 | 48 | 20 | 42 |
| DODDRIDGE | 53 | 11 | 15 | 17 | 8 | 52 |
| FAYETTE | 15 | 37 | 15 | 36 | 37 | 38 |
| GILMER | 52 | 28 | 15 | 44 | 21 | 51 |
| GRANT | 35 | 34 | 15 | 21 | 9 | 36 |
| GREENBRIER | 14 | 10 | 8 | 44 | 27 | 30 |
| HAMPSHIRE | 30 | 9 | 15 | 52 | 3 | 18 |
| HANCOCK | 37 | 29 | 15 | 3 | 5 | 53 |
| HARDY | 48 | 48 | 15 | 53 | 15 | 14 |
| HARRISON | 11 | 26 | 12 | 14 | 31 | 25 |
| JACKSON | 28 | 55 | 6 | 25 | 32 | 23 |
| JEFFERSON | 46 | 3 | 15 | 37 | 4 | 44 |
| KANAWHA | 16 | 52 | 13 | 12 | 39 | 25 |
| LEWIS | 24 | 33 | 15 | 49 | 18 | 47 |
| LINCOLN | 3 | 40 | 15 | 18 | 38 | 6 |
| LOGAN | 1 | 45 | 7 | 30 | 51 | 2 |
| MARION | 36 | 36 | 11 | 43 | 42 | 7 |
| MARSHALL | 18 | 24 | 15 | 22 | 34 | 21 |
| MASON | 21 | 51 | 3 | 22 | 47 | 7 |
| MCDOWELL | 22 | 4 | 15 | 44 | 24 | 39 |
| MERCER | 33 | 19 | 15 | 18 | 25 | 23 |
| MINERAL | 39 | 25 | 15 | 27 | 7 | 27 |
| MINGO | 9 | 47 | 15 | 12 | 54 | 1 |
| MONONGALIA | 55 | 13 | 15 | 14 | 15 | 12 |
| MONROE | 54 | 20 | 15 | 6 | 50 | 27 |
| MORGAN | 29 | 1 | 15 | 47 | 1 | 37 |
| NICHOLAS | 6 | 32 | 2 | 22 | 22 | 15 |
| OHIO | 41 | 8 | 15 | 27 | 12 | 11 |
| PENDLETON | 19 | 6 | 1 | 41 | 11 | 3 |
| PLEASANTS | 49 | 22 | 15 | 10 | 52 | 46 |
| POCAHONTAS | 38 | 2 | 15 | 51 | 26 | 30 |
| PRESTON | 45 | 7 | 9 | 27 | 17 | 48 |
| PUTNAM | 31 | 43 | 15 | 34 | 32 | 17 |
| RALEIGH | 32 | 39 | 10 | 30 | 42 | 20 |
| RANDOLPH | 25 | 12 | 5 | 14 | 49 | 50 |
| RITCHIE | 13 | 49 | 15 | 8 | 55 | 48 |
| ROANE | 20 | 53 | 15 | 9 | 28 | 44 |
| SUMMERS | 12 | 23 | 15 | 49 | 28 | 13 |
| TAYLOR | 27 | 41 | 15 | 55 | 28 | 18 |
| TUCKER | 40 | 18 | 15 | 18 | 18 | 55 |
| TYLER | 47 | 31 | 15 | 3 | 42 | 33 |
| UPSHUR | 51 | 21 | 15 | 54 | 14 | 54 |
| WAYNE | 50 | 38 | 15 | 30 | 36 | 3 |
| WEBSTER | 4 | 16 | 15 | 38 | 13 | 39 |
| WETZEL | 23 | 44 | 15 | 10 | 47 | 21 |
| WIRT | 7 | 54 | 15 | 2 | 40 | 32 |
| WOOD | 43 | 35 | 15 | 30 | 40 | 15 |
| WYOMING | 8 | 14 | 15 | 38 | 45 | 10 |

*Each county is ranked from 1 to 55, where a rank of 1 is assigned to the county with the highest (worst) rate or percentage and a 55 to the county with the lowest (best) rate or percentage. Counties with a "5" in the rank had an equivalent rank as another county and the average rank was returned.

Percentage of Boone County residents with a controlled substance prescription

32.8%

Percentage of West Virginia residents with a controlled substance prescription

23.2%

Percentage of Boone County residents with an opioid prescription

21.7%

Percentage of West Virginia residents with an opioid prescription

14.3%

Percentage of Boone County residents with a benzodiazepine prescription

9%

Percentage of West Virginia residents with a benzodiazepine prescription

6.4%

To access the individual 2023 County Profile Reports, please follow the link below:

<https://dhhr.wv.gov/vip/county-reports/Pages/default.aspx>

Also, check out the interactive county profile dashboard [here](#).

Contact Information:

Mike Goff, Board of Pharmacy Executive Director

Phone: (304) 558-8411

Email: Michael.L.Goff@wv.gov

Brandon Williams, CSMP Epidemiologist

Phone: (304) 414-0633

Email: Brandon.K.Williams@wv.gov

Nathan Wood, CSMP Epidemiologist

Phone: (304) 414-0789

Email: Nathan.G.Wood@wv.gov

