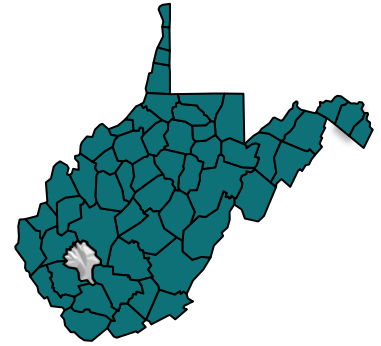


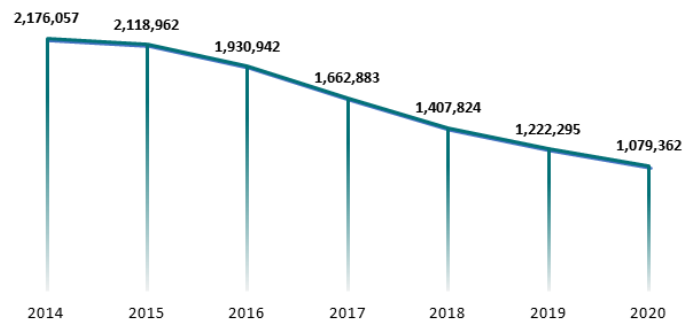
Boone County – 2020

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 the West Virginia Health Statistics Center shows that in 2019, more than 880 people died in association with drug misuse (including prescription and illicit drugs) with a rate of 52.8 per 100,000 population. This is nearly two and a half times the national average. To help combat this epidemic, CDC provided specific indicators to identify high-risk areas within the state to allow for intervention and community education.



There was a
50% decrease
in opioid prescriptions
filled from 2014-2020...

Source: West Virginia Controlled Substance Monitoring Program



...with over **10 million** fewer
opioid pills dispensed from 2019 to
2020 in West Virginia.

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

This indicator includes all opioid prescriptions that are classified as either 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. Census data was used to obtain demographic information and population size.

Figure 1.
Number of Opioid Analgesics Dispensed, Boone County, 2014-2020

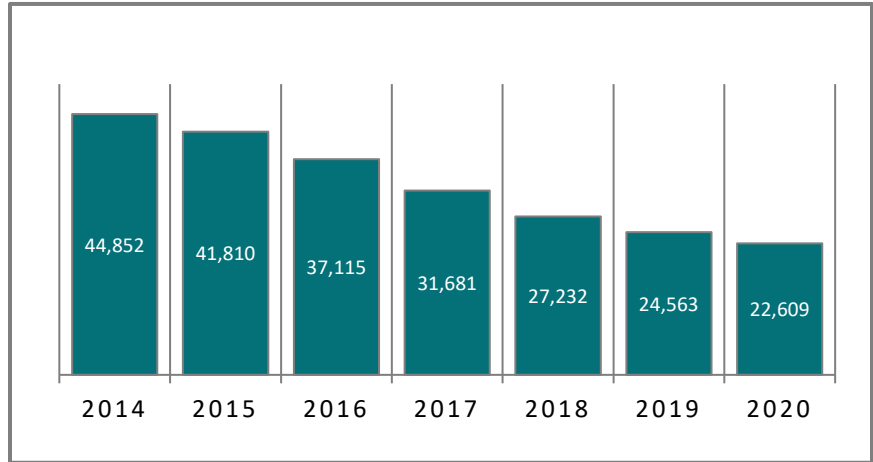
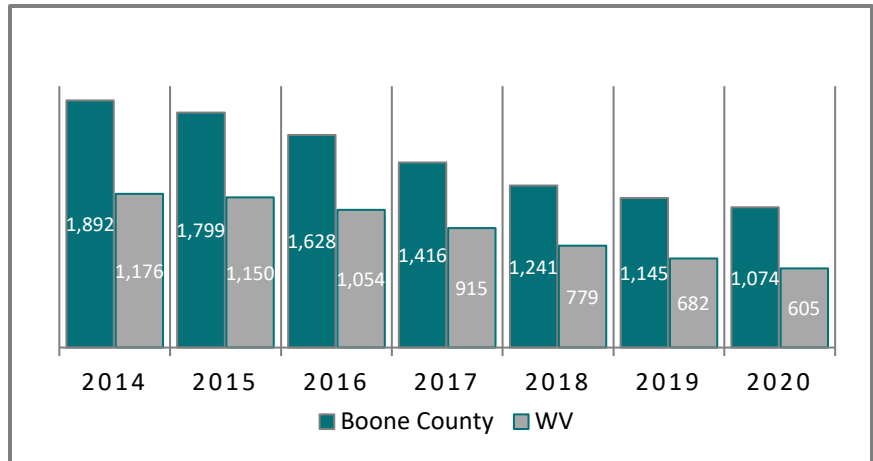


Figure 2.
Rate of Opioid Analgesics per 1,000 Population in Boone County and WV, 2014-2020



Source: West Virginia Controlled Substance Monitoring Program

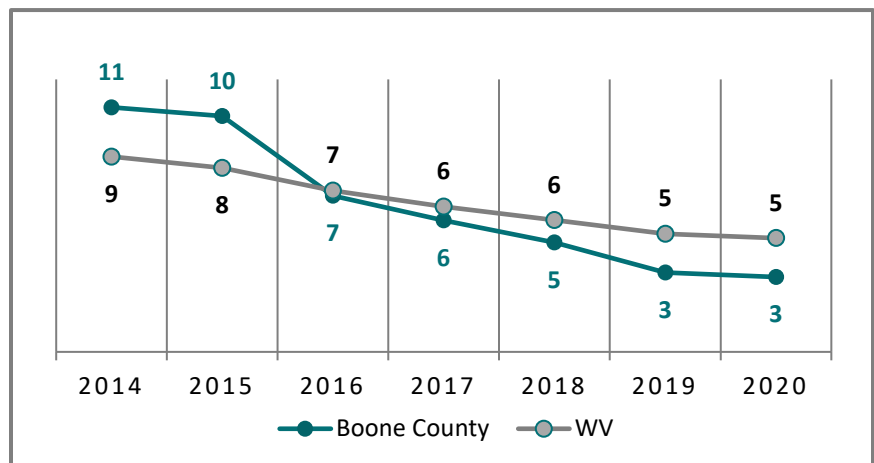
What Does This Mean?

This indicator is important because it provides information about prescription opioid use for each county. These 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 large quantities of opioids that are out in the community. There is an overall decrease in the rate and number of opioids being prescribed in Boone County and the state from 2014-2020. The rate for Boone County was considerably higher than the state.

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 either 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 percent of patients with greater than an average daily dose of 90 MMEs in Boone County compared to the state during 2014-2020.

Figure 3.
Percent of Patients
Receiving More than an
Average Daily Dose of 90
MME, Boone County and
WV, 2014-2020



Source: West Virginia Controlled Substance Monitoring Program

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 abuse 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 2016-2020, Boone County's percent of patients receiving more than an average daily dose of 90 MMEs was lower than the state average and decreased during this time.

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 100,00 residents.

This indicator shows the rate of patients who went to 5 or more prescribers and 5 or more pharmacies within a 6-month period, or multiple provider episode (MPE). The rate is calculated per 100,000 population. It includes all opioid prescriptions that are classified as either Schedule II, III, IV, or V.

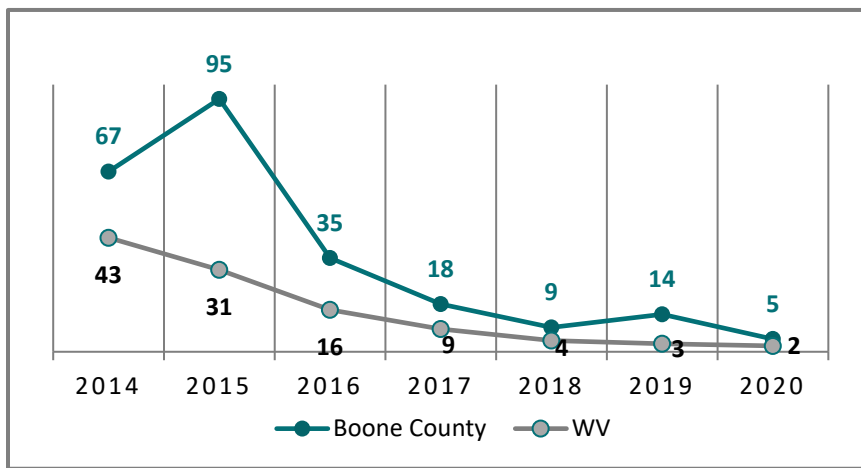


Figure 4.
Rate of Multiple Provider Episodes (MPE) for Prescription Opioids per 100,000 Population, Boone County and WV, 2014-2020

Source: West Virginia Controlled Substance Monitoring Program

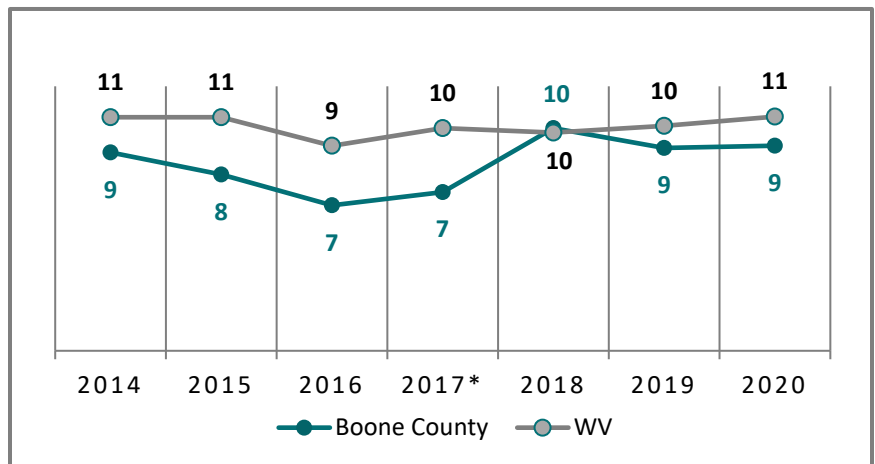
What Does This Mean?

This indicator is important because 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 2014-2020, Boone County had a considerable decrease in the rate of patients who qualified as having an MPE.

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

This indicator represents the percent 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 either Schedule II, III, IV, or V.

Figure 5.
Percent of Patients
Prescribed Long Acting/
Extended-Release Opioids
among Opioid-Naïve
Patients, Boone County,
2014-2020



Source: West Virginia Controlled Substance Monitoring Program

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 LA/ER. From 2014-2016, Boone County saw a decrease in patients who were opioid-naïve and was lower than the state average but increased in 2017 and 2018. However, there was a decrease from 2018-2020.

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

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

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

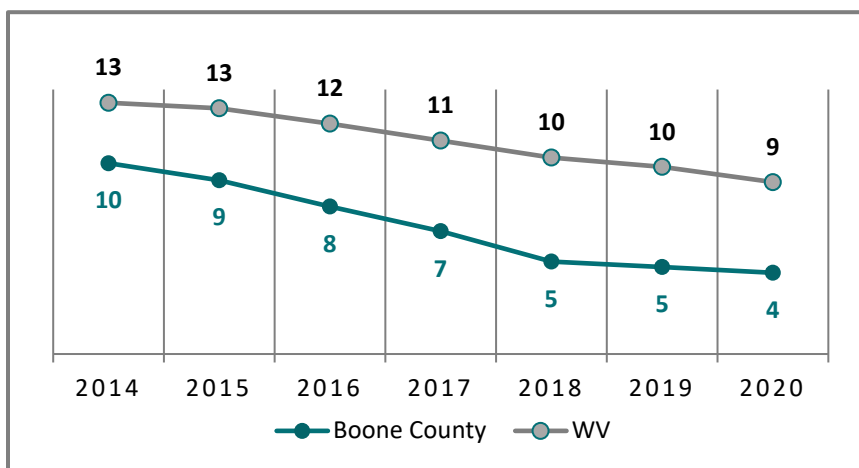


Figure 6.
Percent of Patient
Prescribed Days Overlap
Between Opioid Analgesics,
Boone County and WV,
2014-2020

Source: West Virginia Controlled Substance Monitoring Program

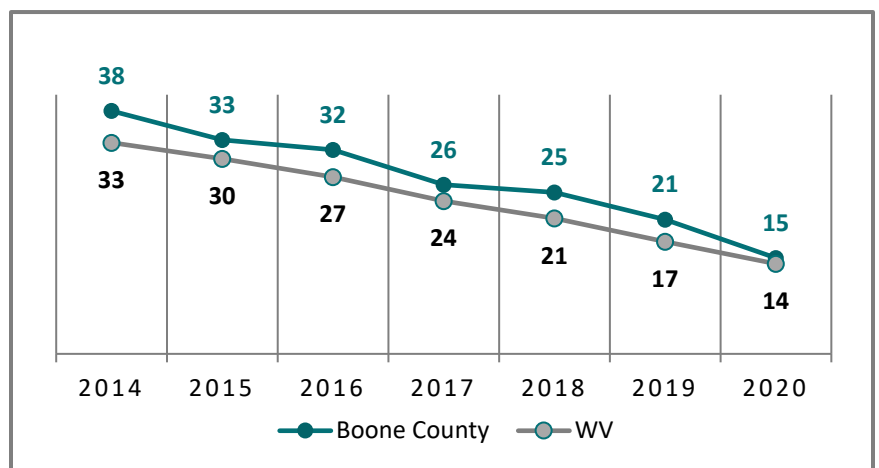
What Does This Mean?

This indicator represents the 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 time period increased 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. During 2014-2020, Boone County had a considerably lower percent of prescription overlap compared to the state average and saw a decrease during this time.

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

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

Figure 7.
Percent of Patient Prescribed Opioid Days that Overlap with Benzodiazepine Prescriptions, Boone County and WV, 2014-2020



Source: West Virginia Controlled Substance Monitoring Program

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 2014-2020, Boone County had a higher percent of days where there was an overlapping opioid and benzodiazepine prescription than the state average but decreased over this time.

County Rankings by Indicator

Patient County	Indicator 1	Indicator 2	Indicator 3	Indicator 4	Indicator 5	Indicator 6
BARBOUR	30	20	36.5	42	38	23.5
BERKELEY	35	4	15	44.5	2	40
BOONE	1	46	8	39.5	48	4
BRAXTON	43	19	36.5	36	20	32
BROOKE	26	28	36.5	23	10.5	42.5
CABELL	9	43	17	23	36.5	12
CALHOUN	44	41	36.5	3	44	50
CLAY	5	25	36.5	35	28	55
DODDRIDGE	54	7	36.5	37	16	48.5
FAYETTE	19	38	7	15	34	34.5
GILMER	50	23	36.5	17	17.5	36.5
GRANT	40	48	36.5	41	14	23.5
GREENBRIER	15	13	36.5	23	30.5	20
HAMPSHIRE	29	2	36.5	43	3	47
HANCOCK	13	15	36.5	32	8	48.5
HARDY	49	30	36.5	27	6	27.5
HARRISON	11	17	36.5	39.5	24	9.5
JACKSON	45	54	11	10	43	33
JEFFERSON	39	3	12	38	4	46
KANAWHA	14	49	9	31	42	27.5
LEWIS	12	18	36.5	34	13	30.5
LINCOLN	4	32	36.5	47.5	26.5	2
LOGAN	2	44	5	44.5	49	3
MARION	28	31	36.5	18.5	34	44
MARSHALL	16	10	14	18.5	30.5	7.5
MASON	32	50	3	14	50.5	25.5
MCDOWELL	8	12	36.5	23	22	18.5
MERCER	25	16	13	13	21	7.5
MINERAL	33	22	36.5	46	5	21.5
MINGO	21	45	36.5	10	55	1
MONONGALIA	55	11	36.5	12	12	42.5
MONROE	53	6	36.5	47.5	15	14
MORGAN	17	1	36.5	50	1	45
NICHOLAS	7	36	36.5	52	23	16.5
OHIO	36	9	36.5	6	17.5	25.5
PENDLETON	37	5	36.5	26	7	11
PLEASANTS	46	29	36.5	1	54	54
POCAHONTAS	42	21	36.5	51	45.5	39
PRESTON	41	8	36.5	29.5	10.5	41
PUTNAM	34	47	36.5	20	40	18.5
RALEIGH	31	34	16	16	41	15
RANDOLPH	22	26	10	10	36.5	30.5
RITCHIE	24	52	36.5	4	53	36.5
ROANE	18	42	4	29.5	25	29
SUMMERS	10	37	2	54	26.5	5
TAYLOR	27	35	36.5	49	39	16.5
TUCKER	47	40	36.5	7	29	53
TYLER	48	53	36.5	28	47	21.5
UPSHUR	52	24	36.5	23	19	52
WAYNE	51	33	36.5	33	32	6
WEBSTER	3	14	1	53	9	38
WETZEL	23	55	36.5	5	52	13
WIRT	20	51	36.5	2	50.5	51
WOOD	38	39	6	8	34	34.5
WYOMING	6	27	36.5	55	45.5	9.5

*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 the same rank as another county and the average rank was returned.

Percent of Boone County residents with a controlled substance prescription

33%

Percent of Boone County residents with an opioid prescription

22%

Percent of Boone County residents with a benzodiazepine prescription

11%

Source: West Virginia Controlled Substance Monitoring Program

For more information regarding this county profile or the West Virginia Controlled Substance Monitoring Program (CSMP), please see contact information below.

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