The West Virginia Violence and Injury Prevention Program (WV VIPP), in collaboration with the West Virginia Board of Pharmacy and the West Virginia University Injury Control Research Center (ICRC), under the direction of the Centers for Disease Control and Prevention (CDC), are working 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. In 2016, over 880 people died in association with drug misuse (including prescription and illicit drugs). This is nearly three 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.

The Controlled Substance Act, signed into law in 1970 by President Richard Nixon, is a federal drug policy that established regulations in the manufacturing and distribution of controlled substances. Controlled substances are categorized into five different classes or schedules, known as schedule I, II, III, IV, and V. Schedule I drugs are considered the most harmful and have the greatest potential for abuse and have no current accepted medical use. Drugs in this class include but are not limited to, Heroin, Cocaine, and Marijuana. Schedule II drugs also have a high potential for abuse but have current accepted medical use. Schedules III-V all have potential for abuse but that potential decreases. The Controlled Substance Act also requires that all entities and individuals who manufacture, distribute, import or export controlled substances be registered under the law. Opioids can be classified as either schedule II, III, or IV.

CDC has given WV VIPP six specific indicators to assist in measuring prescription use. These six indicators include: 1) Number and rate of opioid analgesics (pain relievers), 2) Percent of patients receiving more than an average daily dose of 90 morphine milligram equivalents (MMEs), 3) Rate of multiple provider episodes for prescription opioids, which is patients who have seen 5 or more prescribers and have been to 5 or more pharmacies within a six-month period, 4) Percent of patients prescribed long-acting/extended release opioids among opioid-naïve patients, i.e. patients who have not taken opioid analgesics in 60 days, 5) Percent of patient prescription days with overlapping opioid prescriptions, and 6) Percent of patient prescriptions days with overlapping opioid and benzodiazepine prescriptions.

Source: https://www.cdc.gov/drugoverdose/media/index.html
Below is some general demographic information for the county and the state.

### Table 1.

<table>
<thead>
<tr>
<th>Demographic Data 2015</th>
<th>Monongalia</th>
<th>WV</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population</td>
<td>100,332</td>
<td>1,844,128</td>
</tr>
<tr>
<td>Race</td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>90.80%</td>
<td>93.60%</td>
</tr>
<tr>
<td>Black</td>
<td>3.60%</td>
<td>3.20%</td>
</tr>
<tr>
<td>Other</td>
<td>5.60%</td>
<td>3.20%</td>
</tr>
<tr>
<td>Median age</td>
<td>29.9</td>
<td>41.6</td>
</tr>
<tr>
<td>Median household income</td>
<td>46,166</td>
<td>41,576</td>
</tr>
<tr>
<td>Income below federal poverty level</td>
<td>10.90%</td>
<td>13.10%</td>
</tr>
<tr>
<td>High school graduate or higher</td>
<td>91.20%</td>
<td>84.40%</td>
</tr>
</tbody>
</table>

Source: US Census Bureau, 2014 population estimates

### Mortality Data

Deaths related to drug overdose have increased substantially since 2001. In fact, the number of deaths in 2016 was nearly five times the number of deaths in 2001. These deaths include overdoses related to any drug. The percent of overdose deaths involving Fentanyl have also increased considerably. There was a slight increase from 2001 to 2003 then it began to drop. However, between 2014 and 2016, the percentage increased to nearly 40%, almost eight times higher than in 2001.

### Figure 1.

#### Population by Age Group, 2014

Source: West Virginia Health Statistics Center, Vital Statistics System

### Figure 2.

#### Number of Drug Overdose Deaths, WV, 2001-2016

Source: West Virginia Health Statistics Center, Vital Statistics System

### Figure 3

#### Percent of Overdose Deaths Involving Fentanyl, WV, 2001-2016
Drug overdose death rates per 100,000 population in West Virginia are significantly higher than the U.S. rates for all years. There has been a 369% increase in the rate of drug overdose deaths in West Virginia from 2001 to 2016, compared to only a 149% increase in the U.S. during the same years.

**Figure 4.**

![Drug Overdose Deaths, WV versus US, 2001-2016](image)

Source: West Virginia Health Statistics Center, Vital Statistics System

Drug overdose death rates per 100,000 population in Monongalia County are below the state rate but increased during 2014-2016. The graphs below show the rates of overdose death for Monongalia County compared to West Virginia as a whole for both drugs, overall, and opioids, specifically.

**Figure 5.**

![Rate of All Drug Overdose Deaths per 100,000 Population, Monongalia County and WV, 2014-2016](image)

**Figure 6.**

![Rate of Opioid Drug Overdose Deaths per 100,000 Population, Monongalia County and WV, 2014-2016](image)

Source: West Virginia Health Statistics Center, Vital Statistics System

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1 Each county is ranked from 1 to 55, where a rank of 1 is assigned to the County with the highest rate or percentage as indicated and a 55 to the County with the lowest rate or percentage.
**Indicators**

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

This indicator includes all opioid prescriptions that are classified as either II, III or IV. The figures below show the total number of opioid prescriptions for Monongalia County and the rate per 1,000 population compared to the state. Census data was used to obtain demographic information and population sized.

![Number of Opioid Analgesics Dispensed, Monongalia County, 2014-2016](image)

![Rate of Opioid Analgesics per 1,000 Population, Monongalia County and WV, 2014-2016](image)

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. 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 large quantities of drug that is out in the community. There was an overall decrease in the rate of opioids being prescribed in Monongalia County and the state from 2014-2016. Compared to other counties, Monongalia County ranked at the bottom during 2014-2016.
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 II, III or IV. 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 Monongalia County compared to the state during 2014-2016.

![Figure 9: Percent of Patients Receiving more than an Average Daily Dose of 90 MMEs, Monongalia County and WV, 2014-2016](image)

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 a county level. Monongalia County was overall higher than the state and ranked in the upper half when compared with all other counties.
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 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 II, III or IV.

**Figure 10.**

<table>
<thead>
<tr>
<th>Year</th>
<th>Monongalia County Rate</th>
<th>WV Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>9.2</td>
<td>8.7</td>
</tr>
<tr>
<td>2015</td>
<td>10.6</td>
<td>6.8</td>
</tr>
<tr>
<td>2016</td>
<td>5.7</td>
<td>3.3</td>
</tr>
</tbody>
</table>

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”). Monongalia County had a lower rate of patients in 2014 but a higher rate during 2015-2016 who qualified as having an MPE, when compared to the state. Compared to other counties, Monongalia County ranked near the middle during 2014-2016.
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 60 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 II, III or IV.

What does this mean?

This indicator is important to understand because it provides information about individuals that are not accustomed to opioid medications, which may potentially increase the risk of opioid dependence and abuse. CDC opioid prescribing guidelines recommend using immediate release (IR) opioids before taking LA/ER. Monongalia County had a slightly higher percent of patients who were opioid naïve compared to the state as a whole in 2014 and 2016, but a slightly lower percent in 2015. Compared to other counties, Monongalia County ranked in the upper half during this time.
Indicator 5: Percent of patient prescription days with overlapping opioid prescriptions.

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

**Figure 12.**

<table>
<thead>
<tr>
<th>Year</th>
<th>Monongalia County</th>
<th>WV</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>12.7</td>
<td>11.1</td>
</tr>
<tr>
<td>2015</td>
<td>11.1</td>
<td>10.7</td>
</tr>
<tr>
<td>2016</td>
<td>10.8</td>
<td>10.6</td>
</tr>
</tbody>
</table>

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. Drug diversion is the process of transferring controlled substances that was prescribed legally to another person for illicit use. According to the National Survey on Drug Use and Health (NSDUH), over 50% of people who misused a prescription painkiller got them from a friend or relative for free, and 22% got them from a doctor\(^2\). 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 included more than one opioid. Monongalia County had slightly a higher percent of prescription overlap compared to the state, and was higher ranked than many other counties.

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\(^2\) [https://www.samhsa.gov/atod/opioids](https://www.samhsa.gov/atod/opioids)
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 prescriptions days. It includes all opioid prescriptions that are classified as either II, III or IV.

What does this mean?

This indicator is important because it shows areas in the state where patients are using both opioids and benzodiazepine drugs. Taking an opioid with a benzodiazepine increases the risk for drug overdose and death, as both classes of medication depress the central nervous system. Monongalia County had a lower percent of days where there was an overlapping opioid and benzodiazepine prescription than the state and ranked in the lower half compared to other counties during 2014-2016.
Percent of Monongalia County with a controlled substance prescription: 19.7%
Percent of Monongalia County with an opioid prescription: 13.0%
Percent of Monongalia County with a benzodiazepine prescription: 5.0%

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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