2016 West Virginia Overdose Fatality Analysis: Healthcare Systems Utilization, Risk Factors, and Opportunities for Intervention

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Drug Overdose Rates by State

US Resident Overdose Deaths by State, 2015

West Virginia #1
41.5 deaths per 100,000

Data Source: CDC Wonder
2001-2015 Resident Drug Overdose Mortality Rate
West Virginia and United States

Data Source: WV Health Statistics Center, Vital Surveillance System and CDC Wonder.
Rates are adjusted by age to the 2000 US Standard Million.
Purpose

- Create a model
- Identify risk factors
- Identify opportunities for intervention
Methods

881
Preliminary Occurrence Deaths

830
Preliminary Resident Deaths

(Matched against death records, CSMP, Medicaid, EMS, BBHHF, and Corrections)
Interactions with Health Systems

- **81%** of decedents interacted with one or more systems.
- Just under **40%** of decedents interacted with only one system.

**Males: Interactions with Healthcare Systems**

- 22% None
- 38% One
- 30% Two
- 10% Three

**Females: Interactions with Healthcare Systems**

- 39% None
- 87% One
- 30% Two
- 18% Three

Healthcare systems included BBHHF, EMS, and CSMP. Neither Medicaid or Corrections were included.
Females were more likely than males to have more than one drug in their system at their time of death.

**Males: Number of Drugs at Time of Death**
- One: 16%
- Two: 31%
- Three: 25%
- Four: 14%
- Five: 10%
- Six Plus: 4%

**Females: Number of Drugs at Time of Death**
- One: 10%
- Two: 28%
- Three: 17%
- Four: 10%
- Five: 10%
- Six Plus: 8%
Drugs at Time of Death

Top 10 Drugs Used by Decedents at Time of Death by Age Category

Percent of Decedents

15-24 25-34 35-44 45-54 55-64 65+

Fentanyl
Heroin
Cocaine
Methamphetamine
Oxycodone
Hydrocodone
Morphine
Alprazolam
Diazepam
Gabapentin
A total of 272 decedents (33%) tested positive for a controlled substance, but had no prescription at their time of death.
Decedents with CSMP Interaction

The West Virginia Board of Pharmacy’s Controlled Substances Monitoring Program (CSMP) documents the dispensing of Schedule II-IV controlled substances.
Nearly half (49%) of all female decedents filled a prescription within 30 days of death, compared to 36% of males.
Opioids and benzodiazepines were the most common controlled substance prescriptions filled by decedents in the 12 months prior to their death.
Prescriber and Pharmacy Utilization

- Decedents were three times more likely to have three or more prescribers as compared to the overall CSMP population for 2016 (9% versus 3%).

- Decedents were more than 70 times likely to have prescriptions at four or more pharmacies compared to the overall CSMP population for 2016 (7% vs. 0.1%).
Decedents with EMS Administered Naloxone

- 71% No Interaction with EMS
- 29% Naloxone

49% No Naloxone
14% Naloxone > 48 Hrs Before Death
8% Naloxone < 48 Hrs Before Death

There may be a disparity in the overall emergency response to West Virginians older than 65 that warrants further study.
According to the Kaiser Foundation, only 23% of West Virginia’s overall adult population ages 19-64 have Medicaid.
Medicaid Major Diagnostic Categories

Major Diagnostic Categories with the Most Medicaid Eligible Decedents Represented

<table>
<thead>
<tr>
<th>Category</th>
<th>Males</th>
<th>Females</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Symptoms, Signs, and Ill-Defined Conditions</td>
<td>51</td>
<td>64</td>
<td>56</td>
</tr>
<tr>
<td>Mental Disorders</td>
<td>49</td>
<td>63</td>
<td>54</td>
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<tr>
<td>Diseases of the Musculoskeletal System and Connective Tissue</td>
<td>44</td>
<td>52</td>
<td>47</td>
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<tr>
<td>Injury and Poisoning</td>
<td>40</td>
<td>46</td>
<td>43</td>
</tr>
<tr>
<td>Supplementary Classification of Factors Influencing Health Status and Contact with Health Services</td>
<td>36</td>
<td>51</td>
<td>42</td>
</tr>
</tbody>
</table>

- Symptoms, Signs, and Ill-Defined Conditions
- Mental Disorders
- Diseases of the Musculoskeletal System and Connective Tissue
- Injury and Poisoning
- Supplementary Classification of Factors Influencing Health Status and Contact with Health Services
Medicaid Utilization

Percentage of Decedents Utilizing Medicaid within 12 Months Prior to Death

Excludes claims within < 48 hours of death.

Number of Medicaid Claims Prior to Death

Excludes pharmacy claims and claims within < 48 hours of death.
Medical services have the potential to reach a significant portion of individuals at risk of fatal overdose. Implementation of the Medicaid 1115 Waiver will expand opportunities for treatment and recovery services.
Officials from the WV Department of Military Affairs and Public Safety reported that there is not a uniform strategy for identifying how people with a substance abuse disorder are referred to services in their community.
464 Interacted with Corrections (Jail, Prison, Parole)

157 One Contact with Corrections in the 12 Months Prior to Death

42 (27%) Died within 30 days of the Last Corrections Contact (Regional jail was the last contact for the majority of dececents (88%) with a corrections history.)

- 46% with some high school education died within 30 days.

- 32% of dececents that were never married died within 30 days.
Select High Risk Factors

- Males (67%)
- 35-54 Years of Age (54%)
- HS Education or Less (79%)
- Unmarried (75%)
- Blue Collar Occupations
Decedents by Industry Type

Top Industry Types for Male and Female Decedents

- Construction: Male 32%, Female 45%
- Unknown: Male 11%, Female 8%
- Mining, Quarrying, and Oil & Gas Extraction: Male 7%, Female 7%
- Retail: Male 7%, Female 10%
- Accommodation and Food Services: Male 15%
- Health Care and Social Assistance: Female 4%
- Other Services: Female 4%
Recommendations for Healthcare Providers

- Be prepared to offer screening, referral, and/or treatment.

- Continuing education opportunities that help identify risk factors for overdose death and retain individuals in substance abuse treatment.

- Require prescribers to run a CSMP report on each patient prior to prescribing any Schedule II drugs, any opioids, and any benzodiazepines.

- Prescribers should consider offering naloxone for individuals at increased risk for opioid overdose.
• Enhance CSMP Advisory Committee legislation to identify abnormal or unusual prescribing and dispensing patterns and to permit sharing this data with appropriate professional licensing boards and other agencies.

• Develop CSMP policies and procedures for proactive reports to alert prescribers about the increased risk of overdose and potential misuse or diversion for those individuals known to the CSMP.
Other Recommendations

• Corrections officials should work with judges to assure naloxone availability, treatment referral, and peer supports at release of incarceration.

• Healthcare providers and the public may benefit from education regarding overdose signs and symptoms. This education should include information specific to individuals older than 65 years to increase the chance that someone will call emergency services and that appropriate administration of naloxone is offered.
Contact

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