



# County-level Vulnerability to Rapid Transmission of HIV and Hepatitis C in West Virginia

## Key Findings

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**Key Finding 1: Vulnerability to rapid spread of HIV and hepatitis C via unsterile injection drug use is highest in West Virginia's southern and north-central counties.**

Vulnerability to rapid spread of HIV and hepatitis C (HCV) was estimated by predicting prevalence of unsterile injection drug use (IDU). This assessment uses acute HCV infections and chronic HCV infections reported among those under age 40 as a proxy for IDU. Unsterile IDU is a concern because once introduced, HIV and HCV can spread quickly among a community that shares injection equipment.

**Key Finding 2: Within a county, a higher proportion of people reporting a disability is associated with more unsterile injection drug use.**

The proportion of people with a disability was measured using 5-year estimates from the American Community Survey (ACS), which asks respondents if they experience deafness or serious difficulty hearing; blindness or serious difficulty seeing; serious difficulty concentrating, remembering, or making decisions; serious difficulty walking or climbing stairs; difficulty dressing or bathing; and difficulty doing errands alone. People responding yes to one or more of these questions were considered to have a disability. In some areas, as many as one in three people report such a disability.

**Key Finding 3: Within a county, a higher proportion of people with health insurance is associated with less unsterile injection drug use.**

Health insurance was measured using 5-year estimates from the ACS for people of all ages. Health insurance coverage in WV increased overall from 2016 to 2017, but in thirteen counties, about 1 in 10 people don't have health insurance.

**Key Finding 4: Within a county, a higher rate of drug-related hospitalizations is associated with more unsterile injection drug use.**

Codes from the tenth edition of the International Classification of Diseases (ICD-10) that indicate diagnoses of drug use, abuse, dependence, or poisoning were used to determine the rate of hospital discharges from admissions with a primary or secondary diagnosis related to drug use. Boone County had about 13 times the rate of drug-related hospitalizations than Pendleton County, the county with the lowest rate.

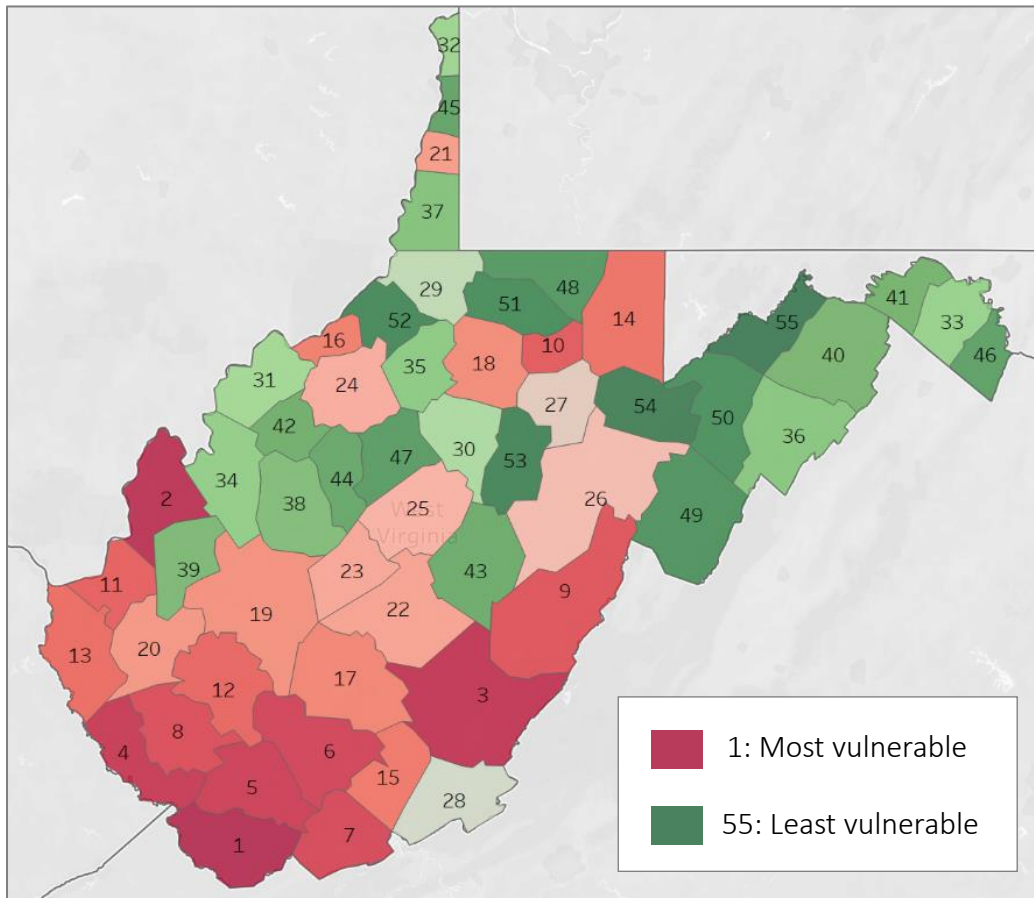
**Key Finding 5: There is strong agreement in vulnerability between our rankings and national assessment performed by CDC.**

With the exception of Greenbrier and Pocahontas, counties ranking in the 20% most vulnerable to rapid spread of HIV/HCV in the WV-specific assessment were also ranked among the 5% most vulnerable counties in the nation by the Centers for Disease Control and Prevention's (CDC) national assessment, which used data from 2012 and 2013. Greenbrier and Pocahontas ranking so high in vulnerability in the most recent assessment might reflect changing patterns of drug use.

**Key Finding 6: Vulnerability to rapid spread of HIV/HCV differs from vulnerability to overdose mortality.**

While many counties ranked highly in vulnerability to both rapid spread of HIV/HCV and overdose mortality, there were some differences. The northern and eastern panhandles were found to be more vulnerable to overdose mortality and the north-central area of the state more vulnerable to rapid spread of HIV/HCV. This could reflect differences in drug use-related behaviors, such as preferred drug type and method of use, across different areas of West Virginia.

**Figure 1.** County rankings for vulnerability to rapid spread of HIV/HCV via unsterile injection drug use.



**Table 1.** County rankings for vulnerability to rapid spread of HIV/HCV via unsterile injection drug use. Counties with an asterisk (\*) were identified in CDC’s national assessment for county-level vulnerability to rapid transmission of HIV/HCV.

Most Vulnerable		More Vulnerable		Vulnerable		Less Vulnerable		Least Vulnerable	
1	McDowell*	12	Boone*	23	Clay*	34	Jackson	45	Brooke*
2	Mason*	13	Wayne*	24	Ritchie	35	Doddridge	46	Jefferson
3	Greenbrier	14	Preston	25	Braxton*	36	Hardy	47	Gilmer
4	Mingo*	15	Summers*	26	Randolph	37	Marshall*	48	Monongalia
5	Wyoming*	16	Pleasants	27	Barbour	38	Roane*	49	Pendleton
6	Raleigh*	17	Fayette*	28	Monroe*	39	Putnam	50	Grant
7	Mercer*	18	Harrison	29	Wetzel	40	Hampshire	51	Marion
8	Logan*	19	Kanawha*	30	Lewis	41	Morgan*	52	Tyler*
9	Pocahontas	20	Lincoln*	31	Wood	42	Wirt	53	Upshur
10	Taylor*	21	Ohio	32	Hancock*	43	Webster*	54	Tucker
11	Cabell*	22	Nicholas*	33	Berkeley*	44	Calhoun*	55	Mineral

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