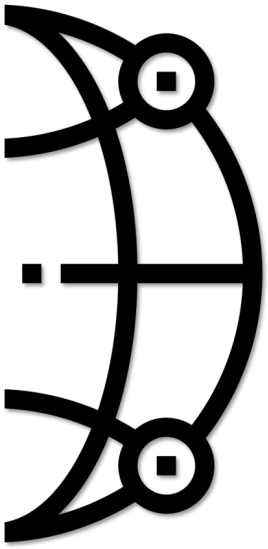
Washington State County Profiles of Social Determinants of Health, HIV, Hepatitis C, and Opioid Overdose



Washington State Department of Health

DOH 347-651 2020

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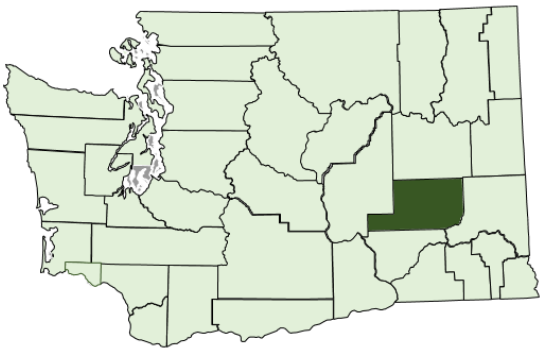
Washington County Profiles of Social Determinants of Health, HIV, Hepatitis C, and Opioid Overdose Among People Who Inject Drugs

ADAMS COUNTY



Background: Opioid use, hepatitis C (HCV), and overdose deaths are increasing in the United States and Washington State.[1-4] There is concern for rapid dissemination of HIV, HCV, and opioid overdose among people who inject drugs (PWID). Following an HIV outbreak among PWID in Scott County, Indiana in 2015,[5] the US Centers for Disease Control and Prevention (CDC) conducted a study to identify indicator variables associated with injection drug use in order to determine which counties may be vulnerable to new or increasing rates of HIV or HCV among PWID.[6] In 2019, Washington performed a similar analysis and added opioid overdose as an outcome since injection drug use is associated with a higher risk of overdose than non-injection use.[7]

Results: Select indicators used in the CDC and Washington State models are shown in the table, with the corresponding values for Washington State and the profiled county.

Next Steps: Indicators can be tracked on the county level to inform prevention efforts within WA, and to better understand how social determinants impact county-level health outcomes. Strategic approaches, including increased HIV and HCV testing, should be supported at the county level as needed. Future work will assess additional years of data and changes in indicators and outcomes over time.

	WA State			Adams		
Indicator	**2016**	**2018**	**Change**	**2016**	**2018**	**Change**
Population & Density						
Population	7,183,700	7,427,570	3.4%	19,510	20,020	2.6%
Population per square mile	108	112	4	10	10	0
Urban-rural classification	N/A			5	5	0
Sociodemographics						
Unemployment rate	6.8%	5.3%	-1.5%	6.1%	6.3%	0.2%
% With vehicle access	93%	93%	0%	95%	94%	-1%
% Uninsured	9.8%	6.8%	-3.0%	19.5%	18.8%	-0.7%
% No high school diploma	6.3%	6.0%	-0.3%	18.2%	18.9%	0.7%
Poverty rate	6.7%	6.2%	-0.5%	8.7%	9.3%	0.7%
Income per capita	$32,999	$39,119	$6,120	$17,781	$19,152	$1,371
% Non-Hispanic White	70%	68%	-2.0%	35.7%	34.5%	-1.2%
Drug Availability & Outcomes						
In Drug Trafficking Zone	N/A			No		
All drug deaths per 100,000	15	14	-1	5	0	-5
Opioid hospitalizations per 100,000	25	19	-6	5	0	-5
Opioid deaths per 100,000	10	9	-1	0	0	0
Provider Resources						
Mental health providers per 100,000	248	293	45	133	151	17
Specialist providers[1] per 100,000	8	9	1	0	0	0
Transmissible Injection-Related Infections						
HIV cases per 100,000	174	181	7	62	60	-2
HCV[2] cases per 100,000	57	59	2	26	5	-21

[1] Specialists included doctors board certified in gastroenterology, hepatology, infectious disease, or addiction medicine.

[2] HCV cases included all acute cases and chronic cases in persons born after 1965.

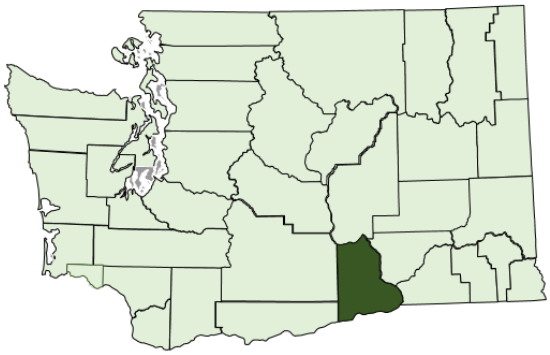
Adams County has certain vulnerabilities, including higher rates of unemployment and less insurance coverage than Washington State.

In both Washington and Adams County the rate of opioid-related hospitalizations and deaths decreased from 2016 to 2018.

***References**: 1. CDC Opioid Overdose: Understanding the Epidemic. 2. NIDA. Washington Opioid Summary. 3. CDC. CDC Estimates Nearly 2.4 Million Americans Living with Hepatitis C. 2018 4. WA DOH. Washington State Communicable Disease Report 2017. 2017. 5. Peters PJ, et al. HIV Infection Linked to Injection Use of Oxymorphone in Indiana, 2014-2015. NEJM 2016. 6.Van Handel MM, et al. County-Level Vulnerability Assessment for Rapid Dissemination of HIV or HCV Infections Among Persons Who Inject Drugs, United States. JAIDS. 2016 7. Mathers BM, et al. Mortality among people who inject drugs: a systematic review and meta-analysis. Bulletin of the WHO. 2013. 8. Rickles M et al. Tennessee's In-state Vulnerability Assessment for a "Rapid Dissemination of Human Immunodeficiency Virus or Hepatitis C Virus Infection" Event Utilizing Data About the Opioid Epidemic. CID. 2018.*

Washington County Profiles of Social Determinants of Health, HIV, Hepatitis C, and Opioid Overdose Among People Who Inject Drugs

BENTON COUNTY



Background: Opioid use, hepatitis C (HCV), and overdose deaths are increasing in the United States and Washington State.[1-4] There is concern for rapid dissemination of HIV, HCV, and opioid overdose among people who inject drugs (PWID). Following an HIV outbreak among PWID in Scott County, Indiana in 2015,[5] the US Centers for Disease Control and Prevention (CDC) conducted a study to identify indicator variables associated with injection drug use in order to determine which counties may be vulnerable to new or increasing rates of HIV or HCV among PWID.[6] In 2019, Washington performed a similar analysis and added opioid overdose as an outcome since injection drug use is associated with a higher risk of overdose than non-injection use.[7]

Results: Select indicators used in the CDC and Washington State models are shown in the table, with the corresponding values for Washington State and the profiled county.

Next Steps: Indicators can be tracked on the county level to inform prevention efforts within WA, and to better understand how social determinants impact county-level health outcomes. Strategic approaches, including increased HIV and HCV testing, should be supported at the county level as needed. Future work will assess additional years of data and changes in indicators and outcomes over time.

	WA State			Benton		
Indicator	**2016**	**2018**	**Change**	**2016**	**2018**	**Change**
Population & Density						
Population	7,183,700	7,427,570	3.4%	190,500	197,420	3.6%
Population per square mile	108	112	4	112	116	4
Urban-rural classification	N/A			3	3	0
Sociodemographics						
Unemployment rate	6.8%	5.3%	-1.5%	6.5%	5.2%	-1.3%
% With vehicle access	93%	93%	0%	95%	95%	0%
% Uninsured	9.8%	6.8%	-3.0%	10.2%	7.5%	-2.7%
% No high school diploma	6.3%	6.0%	-0.3%	6.5%	6.3%	-0.3%
Poverty rate	6.7%	6.2%	-0.5%	6.4%	6.2%	-0.2%
Income per capita	$32,999	$39,119	$6,120	$29,529	$31,580	$2,051
% Non-Hispanic White	70%	68%	-2.0%	72.2%	70.9%	-1.3%
Drug Availability & Outcomes						
In Drug Trafficking Zone	N/A			Yes		
All drug deaths per 100,000	15	14	-1	15	12	-3
Opioid hospitalizations per 100,000	25	19	-6	31	22	-9
Opioid deaths per 100,000	10	9	-1	20	12	-8
Provider Resources						
Mental health providers per 100,000	248	293	45	146	195	48
Specialist providers[1] per 100,000	8	9	1	10	9	-1
Transmissible Injection-Related Infections						
HIV cases per 100,000	174	181	7	61	78	17
HCV[2] cases per 100,000	57	59	2	13	43	30

[1] Specialists included doctors board certified in gastroenterology, hepatology, infectious disease, or addiction medicine.

[2] HCV cases included all acute cases and chronic cases in persons born after 1965.

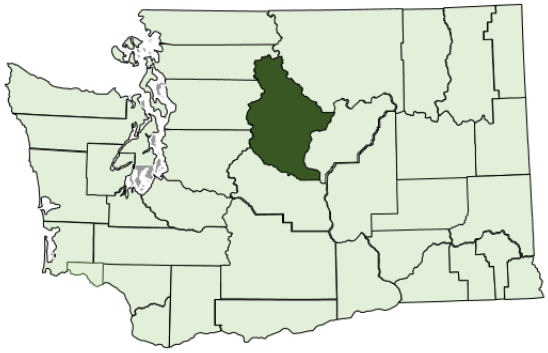
Benton County has certain vulnerabilities, including a higher rate of opioid hospitalizations and deaths than Washington State.

In both Washington and Benton County the rate of opioid-related hospitalizations and deaths decreased from 2016 to 2018.

References: *1. CDC Opioid Overdose: Understanding the Epidemic. 2. NIDA. Washington Opioid Summary. 3. CDC. CDC Estimates Nearly 2.4 Million Americans Living with Hepatitis C. 2018 4. WA DOH. Washington State Communicable Disease Report 2017. 2017. 5. Peters PJ, et al. HIV Infection Linked to Injection Use of Oxymorphone in Indiana, 2014-2015. NEJM 2016. 6.Van Handel MM, et al. County-Level Vulnerability Assessment for Rapid Dissemination of HIV or HCV Infections Among Persons Who Inject Drugs, United States. JAIDS. 2016 7. Mathers BM, et al. Mortality among people who inject drugs: a systematic review and meta-analysis. Bulletin of the WHO. 2013. 8. Rickles M et al. Tennessee's In-state Vulnerability Assessment for a "Rapid Dissemination of Human Immunodeficiency Virus or Hepatitis C Virus Infection" Event Utilizing Data About the Opioid Epidemic. CID. 2018.*

Washington County Profiles of Social Determinants of Health, HIV, Hepatitis C, and Opioid Overdose Among People Who Inject Drugs

CHELAN COUNTY



Background: Opioid use, hepatitis C (HCV), and overdose deaths are increasing in the United States and Washington State.[1-4] There is concern for rapid dissemination of HIV, HCV, and opioid overdose among people who inject drugs (PWID). Following an HIV outbreak among PWID in Scott County, Indiana in 2015,[5] the US Centers for Disease Control and Prevention (CDC) conducted a study to identify indicator variables associated with injection drug use in order to determine which counties may be vulnerable to new or increasing rates of HIV or HCV among PWID.[6] In 2019, Washington performed a similar analysis and added opioid overdose as an outcome since injection drug use is associated with a higher risk of overdose than non-injection use.[7]

Results: Select indicators used in the CDC and Washington State models are shown in the table, with the corresponding values for Washington State and the profiled county.

Next Steps: Indicators can be tracked on the county level to inform prevention efforts within WA, and to better understand how social determinants impact county-level health outcomes. Strategic approaches, including increased HIV and HCV testing, should be supported at the county level as needed. Future work will assess additional years of data and changes in indicators and outcomes over time.

	WA State			Chelan		
Indicator	**2016**	**2018**	**Change**	**2016**	**2018**	**Change**
Population & Density						
Population	7,183,700	7,427,570	3.4%	75,910	77,800	2.5%
Population per square mile	108	112	4	26	27	1
Urban-rural classification	N/A			4	4	0
Sociodemographics						
Unemployment rate	6.8%	5.3%	-1.5%	6.8%	5.3%	-1.5%
% With vehicle access	93%	93%	0%	92%	94%	2%
% Uninsured	9.8%	6.8%	-3.0%	13.5%	8.6%	-4.9%
% No high school diploma	6.3%	6.0%	-0.3%	11.5%	11.0%	-0.5%
Poverty rate	6.7%	6.2%	-0.5%	7.0%	6.7%	-0.2%
Income per capita	$32,999	$39,119	$6,120	$26,109	$29,204	$3,095
% Non-Hispanic White	70%	68%	-2.0%	68.8%	68.1%	-0.7%
Drug Availability & Outcomes						
In Drug Trafficking Zone	N/A			No		
All drug deaths per 100,000	15	14	-1	11	8	-3
Opioid hospitalizations per 100,000	25	19	-6	28	14	-14
Opioid deaths per 100,000	10	9	-1	5	4	-1
Provider Resources						
Mental health providers per 100,000	248	293	45	179	284	105
Specialist providers[1] per 100,000	8	9	1	9	8	-2
Transmissible Injection-Related Infections						
HIV cases per 100,000	174	181	7	72	75	2
HCV[2] cases per 100,000	57	59	2	14	44	29

[1] Specialists included doctors board certified in gastroenterology, hepatology, infectious disease, or addiction medicine.

[2] HCV cases included all acute cases and chronic cases in persons born after 1965.

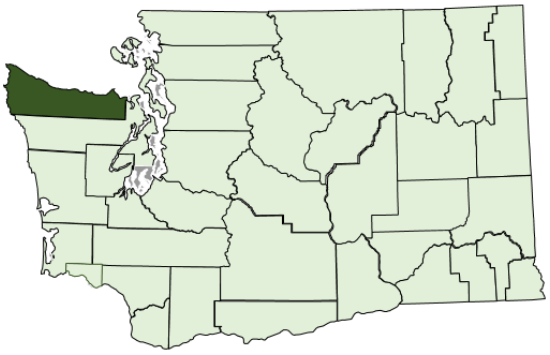
Chelan County has certain vulnerabilities, including less insurance coverage and lower educational attainment than Washington State.

In both Washington and Chelan County the rate of opioid-related hospitalizations and deaths decreased from 2016 to 2018

***References**: 1. CDC Opioid Overdose: Understanding the Epidemic. 2. NIDA. Washington Opioid Summary. 3. CDC. CDC Estimates Nearly 2.4 Million Americans Living with Hepatitis C. 2018 4. WA DOH. Washington State Communicable Disease Report 2017. 2017. 5. Peters PJ, et al. HIV Infection Linked to Injection Use of Oxymorphone in Indiana, 2014-2015. NEJM 2016. 6.Van Handel MM, et al. County-Level Vulnerability Assessment for Rapid Dissemination of HIV or HCV Infections Among Persons Who Inject Drugs, United States. JAIDS. 2016 7. Mathers BM, et al. Mortality among people who inject drugs: a systematic review and meta-analysis. Bulletin of the WHO. 2013. 8. Rickles M et al. Tennessee's In-state Vulnerability Assessment for a "Rapid Dissemination of Human Immunodeficiency Virus or Hepatitis C Virus Infection" Event Utilizing Data About the Opioid Epidemic. CID. 2018.*

Washington County Profiles of Social Determinants of Health, HIV, Hepatitis C, and Opioid Overdose Among People Who Inject Drugs

CLALLAM COUNTY



Background: Opioid use, hepatitis C (HCV), and overdose deaths are increasing in the United States and Washington State.[1-4] There is concern for rapid dissemination of HIV, HCV, and opioid overdose among people who inject drugs (PWID). Following an HIV outbreak among PWID in Scott County, Indiana in 2015,[5] the US Centers for Disease Control and Prevention (CDC) conducted a study to identify indicator variables associated with injection drug use in order to determine which counties may be vulnerable to new or increasing rates of HIV or HCV among PWID.[6] In 2019, Washington performed a similar analysis and added opioid overdose as an outcome since injection drug use is associated with a higher risk of overdose than non-injection use.[7]

Results: Select indicators used in the CDC and Washington State models are shown in the table, with the corresponding values for Washington State and the profiled county.

Next Steps: Indicators can be tracked on the county level to inform prevention efforts within WA, and to better understand how social determinants impact county-level health outcomes. Strategic approaches, including increased HIV and HCV testing, should be supported at the county level as needed. Future work will assess additional years of data and changes in indicators and outcomes over time.

	WA State			Clallam		
Indicator	**2016**	**2018**	**Change**	**2016**	**2018**	**Change**
Population & Density						
Population	7,183,700	7,427,570	3.4%	73,410	75,130	2.3%
Population per square mile	108	112	4	42	43	1
Urban-rural classification	N/A			5	5	0
Sociodemographics						
Unemployment rate	6.8%	5.3%	-1.5%	9.3%	7.7%	-1.6%
% With vehicle access	93%	93%	0%	93%	94%	0%
% Uninsured	9.8%	6.8%	-3.0%	10.8%	8.7%	-2.0%
% No high school diploma	6.3%	6.0%	-0.3%	6.0%	5.5%	-0.6%
Poverty rate	6.7%	6.2%	-0.5%	9.2%	9.1%	-0.1%
Income per capita	$32,999	$39,119	$6,120	$26,967	$29,663	$2,696
% Non-Hispanic White	70%	68%	-2.0%	83.6%	83.0%	-0.6%
Drug Availability & Outcomes						
In Drug Trafficking Zone	N/A			No		
All drug deaths per 100,000	15	14	-1	29	17	-12
Opioid hospitalizations per 100,000	25	19	-6	49	20	-29
Opioid deaths per 100,000	10	9	-1	14	6	-8
Provider Resources						
Mental health providers per 100,000	248	293	45	221	257	37
Specialist providers[1] per 100,000	8	9	1	4	3	-1
Transmissible Injection-Related Infections						
HIV cases per 100,000	174	181	7	98	100	2
HCV[2] cases per 100,000	57	59	2	48	93	45

[1] Specialists included doctors board certified in gastroenterology, hepatology, infectious disease, or addiction medicine.

[2] HCV cases included all acute cases and chronic cases in persons born after 1965.

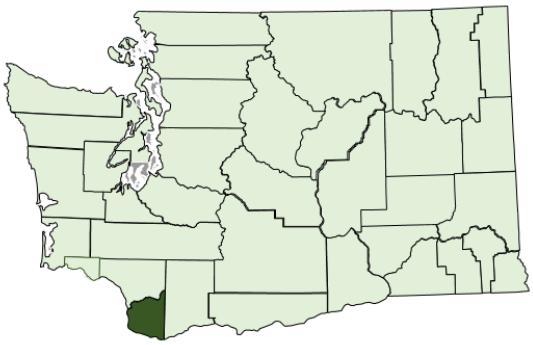
Clallam county has certain vulnerabilities, including higher rates of unemployment and all drug deaths than Washington State.

In both Washington and Clallam County opioid-related hospitalizations and deaths decreased from 2016 to 2018.

References: *1. CDC Opioid Overdose: Understanding the Epidemic. 2. NIDA. Washington Opioid Summary. 3. CDC. CDC Estimates Nearly 2.4 Million Americans Living with Hepatitis C. 2018 4. WA DOH. Washington State Communicable Disease Report 2017. 2017. 5. Peters PJ, et al. HIV Infection Linked to Injection Use of Oxymorphone in Indiana, 2014-2015. NEJM 2016. 6.Van Handel MM, et al. County-Level Vulnerability Assessment for Rapid Dissemination of HIV or HCV Infections Among Persons Who Inject Drugs, United States. JAIDS. 2016 7. Mathers BM, et al. Mortality among people who inject drugs: a systematic review and meta-analysis. Bulletin of the WHO. 2013. 8. Rickles M et al. Tennessee's In-state Vulnerability Assessment for a "Rapid Dissemination of Human Immunodeficiency Virus or Hepatitis C Virus Infection" Event Utilizing Data About the Opioid Epidemic. CID. 2018.*

Washington County Profiles of Social Determinants of Health, HIV, Hepatitis C, and Opioid Overdose Among People Who Inject Drugs

CLARK COUNTY



Background: Opioid use, hepatitis C (HCV), and overdose deaths are increasing in the United States and Washington State.[1-4] There is concern for rapid dissemination of HIV, HCV, and opioid overdose among people who inject drugs (PWID). Following an HIV outbreak among PWID in Scott County, Indiana in 2015,[5] the US Centers for Disease Control and Prevention (CDC) conducted a study to identify indicator variables associated with injection drug use in order to determine which counties may be vulnerable to new or increasing rates of HIV or HCV among PWID.[6] In 2019, Washington performed a similar analysis and added opioid overdose as an outcome since injection drug use is associated with a higher risk of overdose than non-injection use.[7]

Results: Select indicators used in the CDC and Washington State models are shown in the table, with the corresponding values for Washington State and the profiled county.

Next Steps: Indicators can be tracked on the county level to inform prevention efforts within WA, and to better understand how social determinants impact county-level health outcomes. Strategic approaches, including increased HIV and HCV testing, should be supported at the county level as needed. Future work will assess additional years of data and changes in indicators and outcomes over time.

	WA State			Clark		
Indicator	**2016**	**2018**	**Change**	**2016**	**2018**	**Change**
Population & Density						
Population	7,183,700	7,427,570	3.4%	461,010	479,500	4%
Population per square mile	108	112	4	733	762	29
Urban-rural classification	N/A			2	2	0
Sociodemographics						
Unemployment rate	6.8%	5.3%	-1.5%	7.2%	5.4%	-1.8%
% With vehicle access	93%	93%	0%	95%	95%	0%
% Uninsured	9.8%	6.8%	-3.0%	9.0%	6.0%	-3.0%
% No high school diploma	6.3%	6.0%	-0.3%	5.4%	5.0%	-0.4%
Poverty rate	6.7%	6.2%	-0.5%	5.6%	5.2%	-0.4%
Income per capita	$32,999	$39,119	$6,120	$30,207	$34,163	$3,956
% Non-Hispanic White	70%	68%	-2.0%	80.0%	78.9%	-1.1%
Drug Availability & Outcomes						
In Drug Trafficking Zone	N/A			Yes		
All drug deaths per 100,000	15	14	-1	13	9	-3
Opioid hospitalizations per 100,000	25	19	-6	28	21	-7
Opioid deaths per 100,000	10	9	-1	40	25	-15
Provider Resources						
Mental health providers per 100,000	248	293	45	223	281	58
Specialist providers[1] per 100,000	8	9	1	5	7	2
Transmissible Injection-Related Infections						
HIV cases per 100,000	174	181	7	133	145	12
HCV[2] cases per 100,000	57	59	2	67	70	3

[1] Specialists included doctors board certified in gastroenterology, hepatology, infectious disease, or addiction medicine.

[2] HCV cases included all acute cases and chronic cases in persons born after 1965.

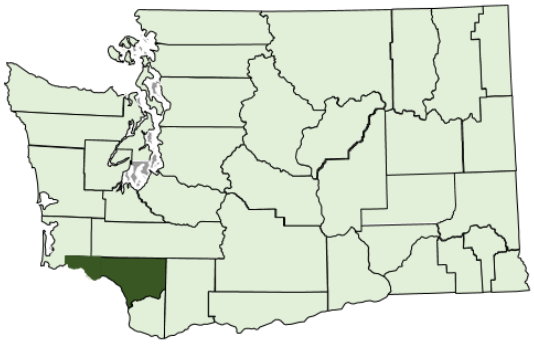
Clark county has certain vulnerabilities, including higher rates of opioid hospitalizations and deaths than Washington State.

In both Washington and Clark County opioid-related hospitalizations and deaths decreased from 2016 to 2018.

***References**: 1. CDC Opioid Overdose: Understanding the Epidemic. 2. NIDA. Washington Opioid Summary. 3. CDC. CDC Estimates Nearly 2.4 Million Americans Living with Hepatitis C. 2018 4. WA DOH. Washington State Communicable Disease Report 2017. 2017. 5. Peters PJ, et al. HIV Infection Linked to Injection Use of Oxymorphone in Indiana, 2014-2015. NEJM 2016. 6.Van Handel MM, et al. County-Level Vulnerability Assessment for Rapid Dissemination of HIV or HCV Infections Among Persons Who Inject Drugs, United States. JAIDS. 2016 7. Mathers BM, et al. Mortality among people who inject drugs: a systematic review and meta-analysis. Bulletin of the WHO. 2013. 8. Rickles M et al. Tennessee's In-state Vulnerability Assessment for a "Rapid Dissemination of Human Immunodeficiency Virus or Hepatitis C Virus Infection" Event Utilizing Data About the Opioid Epidemic. CID. 2018.*

Washington County Profiles of Social Determinants of Health, HIV, Hepatitis C, and Opioid Overdose Among People Who Inject Drugs

COWLITZ COUNTY



Background: Opioid use, hepatitis C (HCV), and overdose deaths are increasing in the United States and Washington State.[1-4] There is concern for rapid dissemination of HIV, HCV, and opioid overdose among people who inject drugs (PWID). Following an HIV outbreak among PWID in Scott County, Indiana in 2015,[5] the US Centers for Disease Control and Prevention (CDC) conducted a study to identify indicator variables associated with injection drug use in order to determine which counties may be vulnerable to new or increasing rates of HIV or HCV among PWID.[6] In 2019, Washington performed a similar analysis and added opioid overdose as an outcome since injection drug use is associated with a higher risk of overdose than non-injection use.[7]

Results: Select indicators used in the CDC and Washington State models are shown in the table, with the corresponding values for Washington State and the profiled county.

Next Steps: Indicators can be tracked on the county level to inform prevention efforts within WA, and to better understand how social determinants impact county-level health outcomes. Strategic approaches, including increased HIV and HCV testing, should be supported at the county level as needed. Future work will assess additional years of data and changes in indicators and outcomes over time.

	WA State			Cowlitz		
Indicator	**2016**	**2018**	**Change**	**2016**	**2018**	**Change**
Population & Density						
Population	7,183,700	7,427,570	3.4%	104,850	107,310	2.3%
Population per square mile	108	112	4	92	94	2
Urban-rural classification	N/A			4	4	0
Sociodemographics						
Unemployment rate	6.8%	5.3%	-1.5%	9.7%	7.8%	-1.9%
% With vehicle access	93%	93%	0%	92.5%	92.6%	0.2%
% Uninsured	9.8%	6.8%	-3.0%	8.8%	5.7%	-3.2%
% No high school diploma	6.3%	6.0%	-0.3%	8.1%	7.8%	-0.3%
Poverty rate	6.7%	6.2%	-0.5%	9.1%	9.0%	-0.1%
Income per capita	$32,999	$39,119	$6,120	$24,756	$27,264	$2,508
% Non-Hispanic White	70%	68%	-2.0%	84.6%	83.8%	-0.8%
Drug Availability & Outcomes						
In Drug Trafficking Zone	N/A			Yes		
All drug deaths per 100,000	15	14	-1	18	13	-5
Opioid hospitalizations per 100,000	25	19	-6	37	29	-8
Opioid deaths per 100,000	10	9	-1	13	7	-6
Provider Resources						
Mental health providers per 100,000	248	293	45	175	267	93
Specialist providers[1] per 100,000	8	9	1	7	5	-2
Transmissible Injection-Related Infections						
HIV cases per 100,000	174	181	7	108	130	23
HCV[2] cases per 100,000	57	59	2	131	130	0

[1] Specialists included doctors board certified in gastroenterology, hepatology, infectious disease, or addiction medicine.

[2] HCV cases included all acute cases and chronic cases in persons born after 1965.

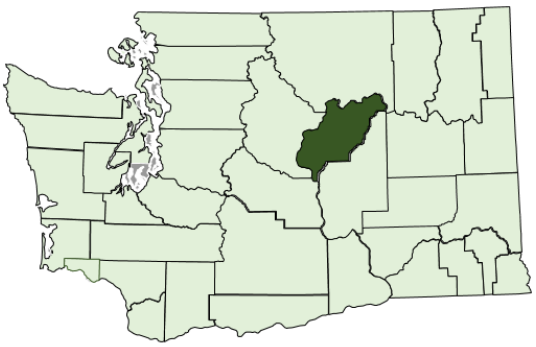
Cowlitz County has certain vulnerabilities, including higher rates of opioid hospitalizations and HCV than Washington State.

In both Washington and Cowlitz County the rate of opioid-related hospitalizations and deaths decreased from 2016 to 2018.

***References**: 1. CDC Opioid Overdose: Understanding the Epidemic. 2. NIDA. Washington Opioid Summary. 3. CDC. CDC Estimates Nearly 2.4 Million Americans Living with Hepatitis C. 2018 4. WA DOH. Washington State Communicable Disease Report 2017. 2017. 5. Peters PJ, et al. HIV Infection Linked to Injection Use of Oxymorphone in Indiana, 2014-2015. NEJM 2016. 6.Van Handel MM, et al. County-Level Vulnerability Assessment for Rapid Dissemination of HIV or HCV Infections Among Persons Who Inject Drugs, United States. JAIDS. 2016 7. Mathers BM, et al. Mortality among people who inject drugs: a systematic review and meta-analysis. Bulletin of the WHO. 2013. 8. Rickles M et al. Tennessee's In-state Vulnerability Assessment for a "Rapid Dissemination of Human Immunodeficiency Virus or Hepatitis C Virus Infection" Event Utilizing Data About the Opioid Epidemic. CID. 2018.*

Washington County Profiles of Social Determinants of Health, HIV, Hepatitis C, and Opioid Overdose Among People Who Inject Drugs

DOUGLAS COUNTY



Background: Opioid use, hepatitis C (HCV), and overdose deaths are increasing in the United States and Washington State.[1-4] There is concern for rapid dissemination of HIV, HCV, and opioid overdose among people who inject drugs (PWID). Following an HIV outbreak among PWID in Scott County, Indiana in 2015,[5] the US Centers for Disease Control and Prevention (CDC) conducted a study to identify indicator variables associated with injection drug use in order to determine which counties may be vulnerable to new or increasing rates of HIV or HCV among PWID.[6] In 2019, Washington performed a similar analysis and added opioid overdose as an outcome since injection drug use is associated with a higher risk of overdose than non-injection use.[7]

Results: Select indicators used in the CDC and Washington State models are shown in the table, with the corresponding values for Washington State and the profiled county.

Next Steps: Indicators can be tracked on the county level to inform prevention efforts within WA, and to better understand how social determinants impact county-level health outcomes. Strategic approaches, including increased HIV and HCV testing, should be supported at the county level as needed. Future work will assess additional years of data and changes in indicators and outcomes over time.

	WA State			Douglas		
Indicator	**2016**	**2018**	**Change**	**2016**	**2018**	**Change**
Population & Density						
Population	7,183,700	7,427,570	3.4%	40,720	42,120	3.4%
Population per square mile	108	112	4	22	23	1
Urban-rural classification	N/A			4	4	0
Sociodemographics						
Unemployment rate	6.8%	5.3%	-1.5%	5.1%	4.0%	-1.1%
% With vehicle access	93%	93%	0%	96%	96%	0.0%
% Uninsured	9.8%	6.8%	-3.0%	13.9%	10.2%	-3.7%
% No high school diploma	6.3%	6.0%	-0.3%	12.2%	11.7%	-0.5%
Poverty rate	6.7%	6.2%	-0.5%	6.9%	6.6%	-0.3%
Income per capita	$32,999	$39,119	$6,120	$23,966	$28,579	$4,613
% Non-Hispanic White	70%	68%	-2.0%	65.3%	64.5%	-0.8%
Drug Availability & Outcomes						
In Drug Trafficking Zone	N/A			No		
All drug deaths per 100,000	15	14	-1	15	5	-10
Opioid hospitalizations per 100,000	25	19	-6	37	17	-20
Opioid deaths per 100,000	10	9	-1	4	2	-2
Provider Resources						
Mental health providers per 100,000	248	293	45	32	39	7
Specialist providers[1] per 100,000	8	9	1	0	2	2
Transmissible Injection-Related Infections						
HIV cases per 100,000	174	181	7	37	36	-1
HCV[2] cases per 100,000	57	59	2	7	59	52

[1] Specialists included doctors board certified in gastroenterology, hepatology, infectious disease, or addiction medicine.

[2] HCV cases included all acute cases and chronic cases in persons born after 1965.

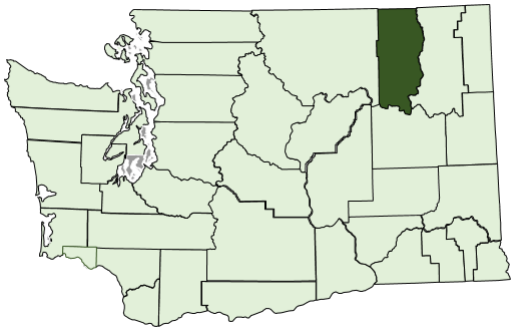
Douglas County has certain vulnerabilities, including less education and insurance than Washington State.

In both Washington and Douglas County the rate of opioid-related hospitalizations and deaths decreased from 2016 to 2018.

***References**: 1. CDC Opioid Overdose: Understanding the Epidemic. 2. NIDA. Washington Opioid Summary. 3. CDC. CDC Estimates Nearly 2.4 Million Americans Living with Hepatitis C. 2018 4. WA DOH. Washington State Communicable Disease Report 2017. 2017. 5. Peters PJ, et al. HIV Infection Linked to Injection Use of Oxymorphone in Indiana, 2014-2015. NEJM 2016. 6.Van Handel MM, et al. County-Level Vulnerability Assessment for Rapid Dissemination of HIV or HCV Infections Among Persons Who Inject Drugs, United States. JAIDS. 2016 7. Mathers BM, et al. Mortality among people who inject drugs: a systematic review and meta-analysis. Bulletin of the WHO. 2013. 8. Rickles M et al. Tennessee's In-state Vulnerability Assessment for a "Rapid Dissemination of Human Immunodeficiency Virus or Hepatitis C Virus Infection" Event Utilizing Data About the Opioid Epidemic. CID. 2018.*

Washington County Profiles of Social Determinants of Health, HIV, Hepatitis C, and Opioid Overdose Among People Who Inject Drugs

FERRY COUNTY



Background: Opioid use, hepatitis C (HCV), and overdose deaths are increasing in the United States and Washington State.[1-4] There is concern for rapid dissemination of HIV, HCV, and opioid overdose among people who inject drugs (PWID). Following an HIV outbreak among PWID in Scott County, Indiana in 2015,[5] the US Centers for Disease Control and Prevention (CDC) conducted a study to identify indicator variables associated with injection drug use in order to determine which counties may be vulnerable to new or increasing rates of HIV or HCV among PWID.[6] In 2019, Washington performed a similar analysis and added opioid overdose as an outcome since injection drug use is associated with a higher risk of overdose than non-injection use.[7]

Results: Select indicators used in the CDC and Washington State models are shown in the table, with the corresponding values for Washington State and the profiled county.

Next Steps: Indicators can be tracked on the county level to inform prevention efforts within WA, and to better understand how social determinants impact county-level health outcomes. Strategic approaches, including increased HIV and HCV testing, should be supported at the county level as needed. Future work will assess additional years of data and changes in indicators and outcomes over time.

	WA State			Ferry		
Indicator	**2016**	**2018**	**Change**	**2016**	**2018**	**Change**
Population & Density						
Population	7,183,700	7,427,570	3.4%	7,700	7,780	1%
Population per square mile	108	112	4	3	4	1
Urban-rural classification	N/A			6	6	0
Sociodemographics						
Unemployment rate	6.8%	5.3%	-1.5%	9.8%	7.7%	-2.1%
% With vehicle access	93%	93%	0%	94%	95%	0.4%
% Uninsured	9.8%	6.8%	-3.0%	11.7%	7.8%	-3.9%
% No high school diploma	6.3%	6.0%	-0.3%	9.1%	10.2%	1.1%
Poverty rate	6.7%	6.2%	-0.5%	14.9%	12.1%	-2.8%
Income per capita	$32,999	$39,119	$6,120	$21,146	$23,640	$2,494
% Non-Hispanic White	70%	68%	-2.0%	73.8%	73.4%	-0.4%
Drug Availability & Outcomes						
In Drug Trafficking Zone	N/A			No		
All drug deaths per 100,000	15	14	-1	0	26	26
Opioid hospitalizations per 100,000	25	19	-6	13	13	0
Opioid deaths per 100,000	10	9	-1	0	1	1
Provider Resources						
Mental health providers per 100,000	248	293	45	234	236	3
Specialist providers[1] per 100,000	8	9	1	0	0	0
Transmissible Injection-Related Infections						
HIV cases per 100,000	174	181	7	52	51	-1
HCV[2] cases per 100,000	57	59	2	65	116	51

[1] Specialists included doctors board certified in gastroenterology, hepatology, infectious disease, or addiction medicine.

[2] HCV cases included all acute cases and chronic cases in persons born after 1965.

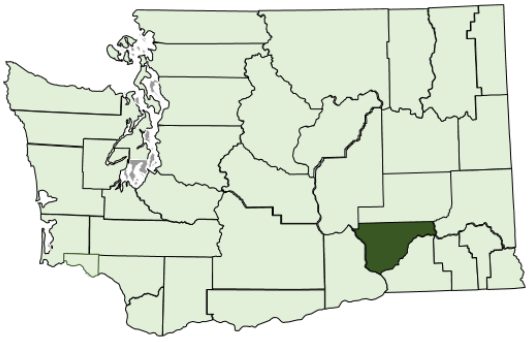
Ferry County has certain vulnerabilities, including higher rates of drug deaths and HCV than Washington State.

While the rate of drug deaths decreased in Washington State from 2016 to 2018, it increased in Ferry County.

***References**: 1. CDC Opioid Overdose: Understanding the Epidemic. 2. NIDA. Washington Opioid Summary. 3. CDC. CDC Estimates Nearly 2.4 Million Americans Living with Hepatitis C. 2018 4. WA DOH. Washington State Communicable Disease Report 2017. 2017. 5. Peters PJ, et al. HIV Infection Linked to Injection Use of Oxymorphone in Indiana, 2014-2015. NEJM 2016. 6.Van Handel MM, et al. County-Level Vulnerability Assessment for Rapid Dissemination of HIV or HCV Infections Among Persons Who Inject Drugs, United States. JAIDS. 2016 7. Mathers BM, et al. Mortality among people who inject drugs: a systematic review and meta-analysis. Bulletin of the WHO. 2013. 8. Rickles M et al. Tennessee's In-state Vulnerability Assessment for a "Rapid Dissemination of Human Immunodeficiency Virus or Hepatitis C Virus Infection" Event Utilizing Data About the Opioid Epidemic. CID. 2018.*

Washington County Profiles of Social Determinants of Health, HIV, Hepatitis C, and Opioid Overdose Among People Who Inject Drugs

FRANKLIN COUNTY



Background: Opioid use, hepatitis C (HCV), and overdose deaths are increasing in the United States and Washington State.[1-4] There is concern for rapid dissemination of HIV, HCV, and opioid overdose among people who inject drugs (PWID). Following an HIV outbreak among PWID in Scott County, Indiana in 2015,[5] the US Centers for Disease Control and Prevention (CDC) conducted a study to identify indicator variables associated with injection drug use in order to determine which counties may be vulnerable to new or increasing rates of HIV or HCV among PWID.[6] In 2019, Washington performed a similar analysis and added opioid overdose as an outcome since injection drug use is associated with a higher risk of overdose than non-injection use.[7]

Results: Select indicators used in the CDC and Washington State models are shown in the table, with the corresponding values for Washington State and the profiled county.

Next Steps: Indicators can be tracked on the county level to inform prevention efforts within WA, and to better understand how social determinants impact county-level health outcomes. Strategic approaches, including increased HIV and HCV testing, should be supported at the county level as needed. Future work will assess additional years of data and changes in indicators and outcomes over time.

	WA State			Franklin		
Indicator	**2016**	**2018**	**Change**	**2016**	**2018**	**Change**
Population & Density						
Population	7,183,700	7,427,570	3.4%	88,670	92,540	4.4%
Population per square mile	108	112	4	71	75	3
Urban-rural classification	N/A			3	3	0
Sociodemographics						
Unemployment rate	6.8%	5.3%	-1.5%	6.8%	5.6%	-1.2%
% With vehicle access	93%	93%	0%	95%	96%	1.3%
% Uninsured	9.8%	6.8%	-3.0%	16.7%	14.2%	-2.5%
% No high school diploma	6.3%	6.0%	-0.3%	14.9%	14.2%	-0.7%
Poverty rate	6.7%	6.2%	-0.5%	6.1%	6.2%	0.1%
Income per capita	$32,999	$39,119	$6,120	$20,997	$23,373	$2,376
% Non-Hispanic White	70%	68%	-2.0%	41.6%	40.7%	-0.9%
Drug Availability & Outcomes						
In Drug Trafficking Zone	N/A			Yes		
All drug deaths per 100,000	15	14	-1	10	9	-2
Opioid hospitalizations per 100,000	25	19	-6	8	15	7
Opioid deaths per 100,000	10	9	-1	4	4	0
Provider Resources						
Mental health providers per 100,000	248	293	45	101	121	19
Specialist providers[1] per 100,000	8	9	1	5	3	-1
Transmissible Injection-Related Infections						
HIV cases per 100,000	174	181	7	71	84	13
HCV[2] cases per 100,000	57	59	2	5	67	62

[1] Specialists included doctors board certified in gastroenterology, hepatology, infectious disease, or addiction medicine.

[2] HCV cases included all acute cases and chronic cases in persons born after 1965.

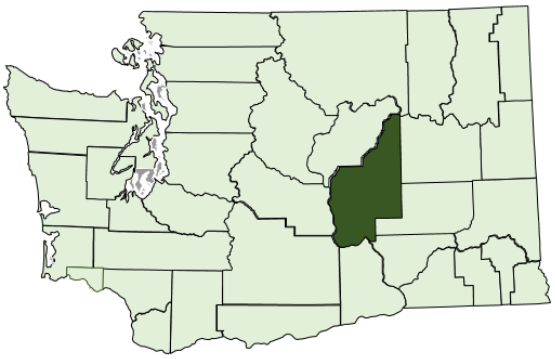
Franklin County has certain vulnerabilities, including less insurance coverage and a higher HCV rate than Washington State.

While the rate of opioid-related hospitalizations decreased in Washington State from 2016 to 2018, it increased in Franklin County.

***References**: 1. CDC Opioid Overdose: Understanding the Epidemic. 2. NIDA. Washington Opioid Summary. 3. CDC. CDC Estimates Nearly 2.4 Million Americans Living with Hepatitis C. 2018 4. WA DOH. Washington State Communicable Disease Report 2017. 2017. 5. Peters PJ, et al. HIV Infection Linked to Injection Use of Oxymorphone in Indiana, 2014-2015. NEJM 2016. 6.Van Handel MM, et al. County-Level Vulnerability Assessment for Rapid Dissemination of HIV or HCV Infections Among Persons Who Inject Drugs, United States. JAIDS. 2016 7. Mathers BM, et al. Mortality among people who inject drugs: a systematic review and meta-analysis. Bulletin of the WHO. 2013. 8. Rickles M et al. Tennessee's In-state Vulnerability Assessment for a "Rapid Dissemination of Human Immunodeficiency Virus or Hepatitis C Virus Infection" Event Utilizing Data About the Opioid Epidemic. CID. 2018.*

Washington County Profiles of Social Determinants of Health, HIV, Hepatitis C, and Opioid Overdose Among People Who Inject Drugs

GRANT COUNTY



Background: Opioid use, hepatitis C (HCV), and overdose deaths are increasing in the United States and Washington State.[1-4] There is concern for rapid dissemination of HIV, HCV, and opioid overdose among people who inject drugs (PWID). Following an HIV outbreak among PWID in Scott County, Indiana in 2015,[5] the US Centers for Disease Control and Prevention (CDC) conducted a study to identify indicator variables associated with injection drug use in order to determine which counties may be vulnerable to new or increasing rates of HIV or HCV among PWID.[6] In 2019, Washington performed a similar analysis and added opioid overdose as an outcome since injection drug use is associated with a higher risk of overdose than non-injection use.[7]

Results: Select indicators used in the CDC and Washington State models are shown in the table, with the corresponding values for Washington State and the profiled county.

Next Steps: Indicators can be tracked on the county level to inform prevention efforts within WA, and to better understand how social determinants impact county-level health outcomes. Strategic approaches, including increased HIV and HCV testing, should be supported at the county level as needed. Future work will assess additional years of data and changes in indicators and outcomes over time.

	WA State			Grant		
Indicator	**2016**	**2018**	**Change**	**2016**	**2018**	**Change**
Population & Density						
Population	7,183,700	7,427,570	3.4%	94,610	97,350	2.9%
Population per square mile	108	112	4	35	36	1
Urban-rural classification	N/A			5	5	0
Sociodemographics						
Unemployment rate	6.8%	5.3%	-1.5%	9.1%	5.6%	-3.5%
% With vehicle access	93%	93%	0%	95%	95%	0.8%
% Uninsured	9.8%	6.8%	-3.0%	16.8%	13.1%	-3.6%
% No high school diploma	6.3%	6.0%	-0.3%	14.6%	14.1%	-0.5%
Poverty rate	6.7%	6.2%	-0.5%	7.6%	6.6%	-0.9%
Income per capita	$32,999	$39,119	$6,120	$20,409	$23,633	$3,224
% Non-Hispanic White	70%	68%	-2.0%	55.5%	54.3%	-1.2%
Drug Availability & Outcomes						
In Drug Trafficking Zone	N/A			No		
All drug deaths per 100,000	15	14	-1	10	14	5
Opioid hospitalizations per 100,000	25	19	-6	23	13	-10
Opioid deaths per 100,000	10	9	-1	4	6	2
Provider Resources						
Mental health providers per 100,000	248	293	45	148	176	28
Specialist providers[1] per 100,000	8	9	1	2	2	0
Transmissable Injection-Related Infections						
HIV cases per 100,000	174	181	7	42	43	1
HCV[2] cases per 100,000	57	59	2	27	34	6

[1] Specialists included doctors board certified in gastroenterology, hepatology, infectious disease, or addiction medicine.

[2] HCV cases included all acute cases and chronic cases in persons born after 1965.

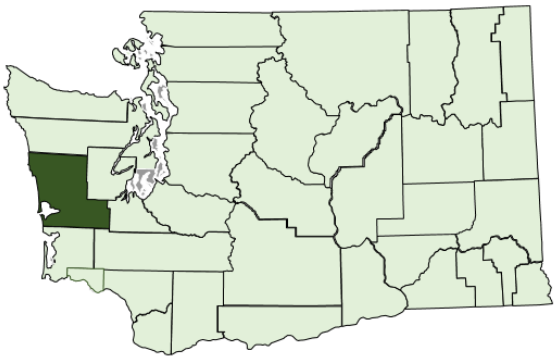
Grant County has certain vulnerabilities, including less insurance coverage and lower educational attainment than Washington State.

While the rate of drug deaths decreased in Washington State from 2016 to 2018, it increased in Grant County.

References: *1. CDC Opioid Overdose: Understanding the Epidemic. 2. NIDA. Washington Opioid Summary. 3. CDC. CDC Estimates Nearly 2.4 Million Americans Living with Hepatitis C. 2018 4. WA DOH. Washington State Communicable Disease Report 2017. 2017. 5. Peters PJ, et al. HIV Infection Linked to Injection Use of Oxymorphone in Indiana, 2014-2015. NEJM 2016. 6.Van Handel MM, et al. County-Level Vulnerability Assessment for Rapid Dissemination of HIV or HCV Infections Among Persons Who Inject Drugs, United States. JAIDS. 2016 7. Mathers BM, et al. Mortality among people who inject drugs: a systematic review and meta-analysis. Bulletin of the WHO. 2013. 8. Rickles M et al. Tennessee's In-state Vulnerability Assessment for a "Rapid Dissemination of Human Immunodeficiency Virus or Hepatitis C Virus Infection" Event Utilizing Data About the Opioid Epidemic. CID. 2018.*

Washington County Profiles of Social Determinants of Health, HIV, Hepatitis C, and Opioid Overdose Among People Who Inject Drugs

GRAYS HARBOR COUNTY



Background: Opioid use, hepatitis C (HCV), and overdose deaths are increasing in the United States and Washington State.[1-4] There is concern for rapid dissemination of HIV, HCV, and opioid overdose among people who inject drugs (PWID). Following an HIV outbreak among PWID in Scott County, Indiana in 2015,[5] the US Centers for Disease Control and Prevention (CDC) conducted a study to identify indicator variables associated with injection drug use in order to determine which counties may be vulnerable to new or increasing rates of HIV or HCV among PWID.[6] In 2019, Washington performed a similar analysis and added opioid overdose as an outcome since injection drug use is associated with a higher risk of overdose than non-injection use.[7]

Results: Select indicators used in the CDC and Washington State models are shown in the table, with the corresponding values for Washington State and the profiled county.

Next Steps: Indicators can be tracked on the county level to inform prevention efforts within WA, and to better understand how social determinants impact county-level health outcomes. Strategic approaches, including increased HIV and HCV testing, should be supported at the county level as needed. Future work will assess additional years of data and changes in indicators and outcomes over time.

	WA State			Grays Harbor		
Indicator	**2016**	**2018**	**Change**	**2016**	**2018**	**Change**
Population & Density						
Population	7,183,700	7,427,570	3.4%	72,820	73,610	1.1%
Population per square mile	108	112	4	38	39	1
Urban-rural classification	N/A			5	5	0
Sociodemographics						
Unemployment rate	6.8%	5.3%	-1.5%	12.1%	8.4%	-3.7%
% With vehicle access	93%	93%	0%	93%	93%	-0.2%
% Uninsured	9.8%	6.8%	-3.0%	12.6%	7.9%	-4.6%
% No high school diploma	6.3%	6.0%	-0.3%	8.2%	7.8%	-0.4%
Poverty rate	6.7%	6.2%	-0.5%	9.3%	9.0%	-0.3%
Income per capita	$32,999	$39,119	$6,120	$23,799	$25,374	$1,575
% Non-Hispanic White	70%	68%	-2.0%	80.0%	79.6%	-0.4%
Drug Availability & Outcomes						
In Drug Trafficking Zone	N/A			No		
All drug deaths per 100,000	15	14	-1	30	15	-15
Opioid hospitalizations per 100,000	25	19	-6	23	23	0
Opioid deaths per 100,000	10	9	-1	10	6	-4
Provider Resources						
Mental health providers per 100,000	248	293	45	121	148	27
Specialist providers[1] per 100,000	8	9	1	3	5	3
Transmissible Injection-Related Infections						
HIV cases per 100,000	174	181	7	104	122	18
HCV[2] cases per 100,000	57	59	2	70	109	39

[1] Specialists included doctors board certified in gastroenterology, hepatology, infectious disease, or addiction medicine.

[2] HCV cases included all acute cases and chronic cases in persons born after 1965.

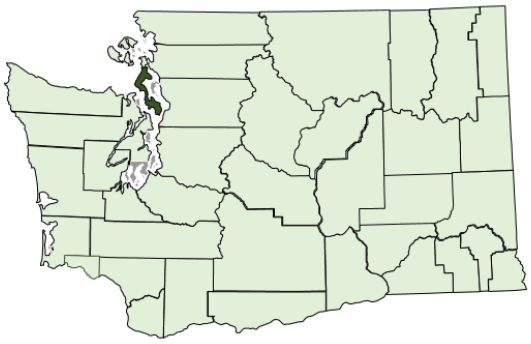
Grays Harbor County has certain vulnerabilities, including higher rates of unemployment and HCV than Washington State.

The rate of drug deaths decreased in both Washington and Grays Harbor County from 2016 and 2018.

***References**: 1. CDC Opioid Overdose: Understanding the Epidemic. 2. NIDA. Washington Opioid Summary. 3. CDC. CDC Estimates Nearly 2.4 Million Americans Living with Hepatitis C. 2018 4. WA DOH. Washington State Communicable Disease Report 2017. 2017. 5. Peters PJ, et al. HIV Infection Linked to Injection Use of Oxymorphone in Indiana, 2014-2015. NEJM 2016. 6.Van Handel MM, et al. County-Level Vulnerability Assessment for Rapid Dissemination of HIV or HCV Infections Among Persons Who Inject Drugs, United States. JAIDS. 2016 7. Mathers BM, et al. Mortality among people who inject drugs: a systematic review and meta-analysis. Bulletin of the WHO. 2013. 8. Rickles M et al. Tennessee's In-state Vulnerability Assessment for a "Rapid Dissemination of Human Immunodeficiency Virus or Hepatitis C Virus Infection" Event Utilizing Data About the Opioid Epidemic. CID. 2018.*

Washington County Profiles of Social Determinants of Health, HIV, Hepatitis C, and Opioid Overdose Among People Who Inject Drugs

ISLAND COUNTY



Background: Opioid use, hepatitis C (HCV), and overdose deaths are increasing in the United States and Washington State.[1-4] There is concern for rapid dissemination of HIV, HCV, and opioid overdose among people who inject drugs (PWID). Following an HIV outbreak among PWID in Scott County, Indiana in 2015,[5] the US Centers for Disease Control and Prevention (CDC) conducted a study to identify indicator variables associated with injection drug use in order to determine which counties may be vulnerable to new or increasing rates of HIV or HCV among PWID.[6] In 2019, Washington performed a similar analysis and added opioid overdose as an outcome since injection drug use is associated with a higher risk of overdose than non-injection use.[7]

Results: Select indicators used in the CDC and Washington State models are shown in the table, with the corresponding values for Washington State and the profiled county.

Next Steps: Indicators can be tracked on the county level to inform prevention efforts within WA, and to better understand how social determinants impact county-level health outcomes. Strategic approaches, including increased HIV and HCV testing, should be supported at the county level as needed. Future work will assess additional years of data and changes in indicators and outcomes over time.

	WA State			Island		
Indicator	**2016**	**2018**	**Change**	**2016**	**2018**	**Change**
Population & Density						
Population	7,183,700	7,427,570	3.4%	82,910	83,860	1.5%
Population per square mile	108	112	4	398	402	5
Urban-rural classification	N/A			5	5	0
Sociodemographics						
Unemployment rate	6.8%	5.3%	-1.5%	7.7%	6.1%	-1.6%
% With vehicle access	93%	93%	0%	96%	96%	0.8%
% Uninsured	9.8%	6.8%	-3.0%	6.7%	5.0%	-1.8%
% No high school diploma	6.3%	6.0%	-0.3%	3.6%	3.3%	-0.3%
Poverty rate	6.7%	6.2%	-0.5%	5.2%	5.0%	-0.2%
Income per capita	$32,999	$39,119	$6,120	$32,503	$35,364	$2,861
% Non-Hispanic White	70%	68%	-2.0%	80.7%	79.5%	-1.2%
Drug Availability & Outcomes						
In Drug Trafficking Zone	N/A			No		
All drug deaths per 100,000	15	14	-1	6	4	-2
Opioid hospitalizations per 100,000	25	19	-6	21	18	-3
Opioid deaths per 100,000	10	9	-1	1	2	1
Provider Resources						
Mental health providers per 100,000	248	293	45	251	273	23
Specialist providers[1] per 100,000	8	9	1	0	4	4
Transmissible Injection-Related Infections						
HIV cases per 100,000	174	181	7	92	109	17
HCV[2] cases per 100,000	57	59	2	24	35	10

[1] Specialists included doctors board certified in gastroenterology, hepatology, infectious disease, or addiction medicine.

[2] HCV cases included all acute cases and chronic cases in persons born after 1965.

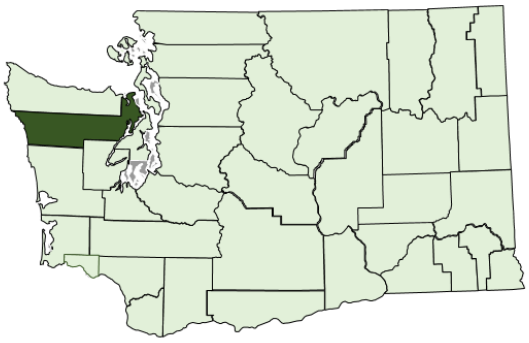
Island County has certain vulnerabilities, including a higher rate of unemployment than Washington State.

The rate of drug deaths decreased in both Washington and Island County from 2016 and 2018.

References: *1. CDC Opioid Overdose: Understanding the Epidemic. 2. NIDA. Washington Opioid Summary. 3. CDC. CDC Estimates Nearly 2.4 Million Americans Living with Hepatitis C. 2018 4. WA DOH. Washington State Communicable Disease Report 2017. 2017. 5. Peters PJ, et al. HIV Infection Linked to Injection Use of Oxymorphone in Indiana, 2014-2015. NEJM 2016. 6.Van Handel MM, et al. County-Level Vulnerability Assessment for Rapid Dissemination of HIV or HCV Infections Among Persons Who Inject Drugs, United States. JAIDS. 2016 7. Mathers BM, et al. Mortality among people who inject drugs: a systematic review and meta-analysis. Bulletin of the WHO. 2013. 8. Rickles M et al. Tennessee's In-state Vulnerability Assessment for a "Rapid Dissemination of Human Immunodeficiency Virus or Hepatitis C Virus Infection" Event Utilizing Data About the Opioid Epidemic. CID. 2018.*

Washington County Profiles of Social Determinants of Health, HIV, Hepatitis C, and Opioid Overdose Among People Who Inject Drugs

JEFFERSON COUNTY



Background: Opioid use, hepatitis C (HCV), and overdose deaths are increasing in the United States and Washington State.[1-4] There is concern for rapid dissemination of HIV, HCV, and opioid overdose among people who inject drugs (PWID). Following an HIV outbreak among PWID in Scott County, Indiana in 2015,[5] the US Centers for Disease Control and Prevention (CDC) conducted a study to identify indicator variables associated with injection drug use in order to determine which counties may be vulnerable to new or increasing rates of HIV or HCV among PWID.[6] In 2019, Washington performed a similar analysis and added opioid overdose as an outcome since injection drug use is associated with a higher risk of overdose than non-injection use.[7]

Results: Select indicators used in the CDC and Washington State models are shown in the table, with the corresponding values for Washington State and the profiled county.

Next Steps: Indicators can be tracked on the county level to inform prevention efforts within WA, and to better understand how social determinants impact county-level health outcomes. Strategic approaches, including increased HIV and HCV testing, should be supported at the county level as needed. Future work will assess additional years of data and changes in indicators and outcomes over time.

	WA State			Jefferson		
Indicator	**2016**	**2018**	**Change**	**2016**	**2018**	**Change**
Population & Density						
Population	7,183,700	7,427,570	3.4%	31,090	31,590	1.6%
Population per square mile	108	112	4	17	18	1
Urban-rural classification	N/A			6	6	0
Sociodemographics						
Unemployment rate	6.8%	5.3%	-1.5%	7.2%	6.3%	-0.9%
% With vehicle access	93%	93%	0%	95%	96%	0.4%
% Uninsured	9.8%	6.8%	-3.0%	7.8%	5.7%	-2.1%
% No high school diploma	6.3%	6.0%	-0.3%	4.3%	4.3%	-0.1%
Poverty rate	6.7%	6.2%	-0.5%	7.7%	8.5%	0.8%
Income per capita	$32,999	$39,119	$6,120	$30,871	$34,187	$3,316
% Non-Hispanic White	70%	68%	-2.0%	88.7%	88.7%	0.0%
Drug Availability & Outcomes						
In Drug Trafficking Zone	N/A			No		
All drug deaths per 100,000	15	14	-1	23	19	-4
Opioid hospitalizations per 100,000	25	19	-6	42	25	-17
Opioid deaths per 100,000	10	9	-1	6	2	-4
Provider Resources						
Mental health providers per 100,000	248	293	45	267	295	28
Specialist providers[1] per 100,000	8	9	1	3	3	0
Transmissible Injection-Related Infections						
HIV cases per 100,000	174	181	7	109	158	49
HCV[2] cases per 100,000	57	59	2	19	35	16

[1] Specialists included doctors board certified in gastroenterology, hepatology, infectious disease, or addiction medicine.

[2] HCV cases included all acute cases and chronic cases in persons born after 1965.

Jefferson County has certain vulnerabilities, including higher rates of unemployment and deaths related to drugs than Washington State.

The rate of drug deaths decreased in both Washington and Jefferson County from 2016 and 2018.

***References**: 1. CDC Opioid Overdose: Understanding the Epidemic. 2. NIDA. Washington Opioid Summary. 3. CDC. CDC Estimates Nearly 2.4 Million Americans Living with Hepatitis C. 2018 4. WA DOH. Washington State Communicable Disease Report 2017. 2017. 5. Peters PJ, et al. HIV Infection Linked to Injection Use of Oxymorphone in Indiana, 2014-2015. NEJM 2016. 6.Van Handel MM, et al. County-Level Vulnerability Assessment for Rapid Dissemination of HIV or HCV Infections Among Persons Who Inject Drugs, United States. JAIDS. 2016 7. Mathers BM, et al. Mortality among people who inject drugs: a systematic review and meta-analysis. Bulletin of the WHO. 2013. 8. Rickles M et al. Tennessee's In-state Vulnerability Assessment for a "Rapid Dissemination of Human Immunodeficiency Virus or Hepatitis C Virus Infection" Event Utilizing Data About the Opioid Epidemic. CID. 2018.*

Washington County Profiles of Social Determinants of Health, HIV, Hepatitis C, and Opioid Overdose Among People Who Inject Drugs

KING COUNTY

Background: Opioid use, hepatitis C (HCV), and overdose deaths are increasing in the United States and Washington State.[1-4] There is concern for rapid dissemination of HIV, HCV, and opioid overdose among people who inject drugs (PWID). Following an HIV outbreak among PWID in Scott County, Indiana in 2015,[5] the US Centers for Disease Control and Prevention (CDC) conducted a study to identify indicator variables associated with injection drug use in order to determine which counties may be vulnerable to new or increasing rates of HIV or HCV among PWID.[6] In 2019, Washington performed a similar analysis and added opioid overdose as an outcome since injection drug use is associated with a higher risk of overdose than non-injection use.[7]

Results: Select indicators used in the CDC and Washington State models are shown in the table, with the corresponding values for Washington State and the profiled county.

Next Steps: Indicators can be tracked on the county level to inform prevention efforts within WA, and to better understand how social determinants impact county-level health outcomes. Strategic approaches, including increased HIV and HCV testing, should be supported at the county level as needed. Future work will assess additional years of data and changes in indicators and outcomes over time.

	WA State			King		
Indicator	**2016**	**2018**	**Change**	**2016**	**2018**	**Change**
Population & Density						
Population	7,183,700	7,427,570	3.4%	2,105,100	2,190,200	4%
Population per square mile	108	112	4	995	1035	40
Urban-rural classification	N/A			1	1	0
Sociodemographics						
Unemployment rate	6.8%	5.3%	-1.5%	5.5%	4.5%	-1.0%
% With vehicle access	93%	93%	0%	90%	90%	-0.2%
% Uninsured	9.8%	6.8%	-3.0%	8.2%	5.6%	-2.6%
% No high school diploma	6.3%	6.0%	-0.3%	5.2%	4.9%	-0.3%
Poverty rate	6.7%	6.2%	-0.5%	5.9%	5.4%	-0.5%
Income per capita	$32,999	$39,119	$6,120	$43,629	$49,298	$5,669
% Non-Hispanic White	70%	68%	-2.0%	62.2%	60.4%	-1.8%
Drug Availability & Outcomes						
In Drug Trafficking Zone	N/A			Yes		
All drug deaths per 100,000	15	14	-1	14	15	1
Opioid hospitalizations per 100,000	25	19	-6	21	15	-6
Opioid deaths per 100,000	10	9	-1	207	233	26
Provider Resources						
Mental health providers per 100,000	248	293	45	290	343	53
Specialist providers[1] per 100,000	8	9	1	14	15	1
Transmissible Injection-Related Infections						
HIV cases per 100,000	174	181	7	322	321	-1
HCV[2] cases per 100,000	57	59	2	42	38	-4

[1] Specialists included doctors board certified in gastroenterology, hepatology, infectious disease, or addiction medicine.

[2] HCV cases included all acute cases and chronic cases in persons born after 1965.

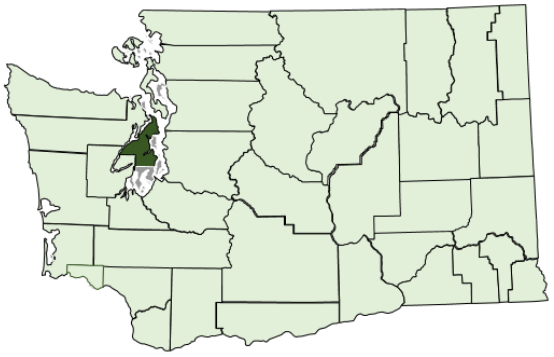
King County has certain vulnerabilities, including higher rates of HIV and HCV infection than Washington State.

While the rate of opioid-related deaths decreased in Washington State from 2016 and 2018, it increased in King County.

References: *1. CDC Opioid Overdose: Understanding the Epidemic. 2. NIDA. Washington Opioid Summary. 3. CDC. CDC Estimates Nearly 2.4 Million Americans Living with Hepatitis C. 2018 4. WA DOH. Washington State Communicable Disease Report 2017. 2017. 5. Peters PJ, et al. HIV Infection Linked to Injection Use of Oxymorphone in Indiana, 2014-2015. NEJM 2016. 6.Van Handel MM, et al. County-Level Vulnerability Assessment for Rapid Dissemination of HIV or HCV Infections Among Persons Who Inject Drugs, United States. JAIDS. 2016 7. Mathers BM, et al. Mortality among people who inject drugs: a systematic review and meta-analysis. Bulletin of the WHO. 2013. 8. Rickles M et al. Tennessee's In-state Vulnerability Assessment for a "Rapid Dissemination of Human Immunodeficiency Virus or Hepatitis C Virus Infection" Event Utilizing Data About the Opioid Epidemic. CID. 2018.*

Washington County Profiles of Social Determinants of Health, HIV, Hepatitis C, and Opioid Overdose Among People Who Inject Drugs

KITSAP COUNTY



Background: Opioid use, hepatitis C (HCV), and overdose deaths are increasing in the United States and Washington State.[1-4] There is concern for rapid dissemination of HIV, HCV, and opioid overdose among people who inject drugs (PWID). Following an HIV outbreak among PWID in Scott County, Indiana in 2015,[5] the US Centers for Disease Control and Prevention (CDC) conducted a study to identify indicator variables associated with injection drug use in order to determine which counties may be vulnerable to new or increasing rates of HIV or HCV among PWID.[6] In 2019, Washington performed a similar analysis and added opioid overdose as an outcome since injection drug use is associated with a higher risk of overdose than non-injection use.[7]

Results: Select indicators used in the CDC and Washington State models are shown in the table, with the corresponding values for Washington State and the profiled county.

Next Steps: Indicators can be tracked on the county level to inform prevention efforts within WA, and to better understand how social determinants impact county-level health outcomes. Strategic approaches, including increased HIV and HCV testing, should be supported at the county level as needed. Future work will assess additional years of data and changes in indicators and outcomes over time.

	WA State			Kitsap		
Indicator	**2016**	**2018**	**Change**	**2016**	**2018**	**Change**
Population & Density						
Population	7,183,700	7,427,570	3.4%	262,590	267,120	1.7%
Population per square mile	108	112	4	665	676	11
Urban-rural classification	N/A			3	3	0
Sociodemographics						
Unemployment rate	6.8%	5.3%	-1.5%	7.0%	5.2%	-1.8%
% With vehicle access	93%	93%	0%	94%	95%	0.2%
% Uninsured	9.8%	6.8%	-3.0%	7.2%	4.7%	-2.5%
% No high school diploma	6.3%	6.0%	-0.3%	3.8%	3.8%	0.0%
Poverty rate	6.7%	6.2%	-0.5%	5.9%	5.8%	-0.1%
Income per capita	$32,999	$39,119	$6,120	$32,801	$35,826	$3,025
% Non-Hispanic White	70%	68%	-2.0%	77.7%	77.0%	-0.7%
Drug Availability & Outcomes						
In Drug Trafficking Zone	N/A			Yes		
All drug deaths per 100,000	15	14	-1	14	10	-4
Opioid hospitalizations per 100,000	25	19	-6	17	20	3
Opioid deaths per 100,000	10	9	-1	26	12	-14
Provider Resources						
Mental health providers per 100,000	248	293	45	216	267	51
Specialist providers[1] per 100,000	8	9	1	5	4	0
Transmissible Injection-Related Infections						
HIV cases per 100,000	174	181	7	112	116	4
HCV[2] cases per 100,000	57	59	2	32	35	3

[1] Specialists included doctors board certified in gastroenterology, hepatology, infectious disease, or addiction medicine.

[2] HCV cases included all acute cases and chronic cases in persons born after 1965.

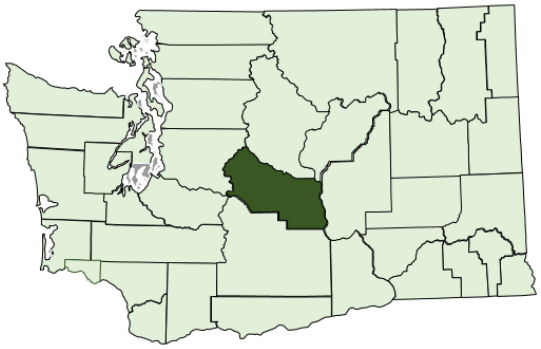
Kitsap County has certain vulnerabilities, including a higher rate of opioid-related hospitalizations than Washington State.

The rate of deaths related to opioids decreased in both Washington State and Kitsap County from 2016 to 2018.

***References**: 1. CDC Opioid Overdose: Understanding the Epidemic. 2. NIDA. Washington Opioid Summary. 3. CDC. CDC Estimates Nearly 2.4 Million Americans Living with Hepatitis C. 2018 4. WA DOH. Washington State Communicable Disease Report 2017. 2017. 5. Peters PJ, et al. HIV Infection Linked to Injection Use of Oxymorphone in Indiana, 2014-2015. NEJM 2016. 6.Van Handel MM, et al. County-Level Vulnerability Assessment for Rapid Dissemination of HIV or HCV Infections Among Persons Who Inject Drugs, United States. JAIDS. 2016 7. Mathers BM, et al. Mortality among people who inject drugs: a systematic review and meta-analysis. Bulletin of the WHO. 2013. 8. Rickles M et al. Tennessee's In-state Vulnerability Assessment for a "Rapid Dissemination of Human Immunodefi-*

Washington County Profiles of Social Determinants of Health, HIV, Hepatitis C, and Opioid Overdose Among People Who Inject Drugs

KITTITAS COUNTY



Background: Opioid use, hepatitis C (HCV), and overdose deaths are increasing in the United States and Washington State.[1-4] There is concern for rapid dissemination of HIV, HCV, and opioid overdose among people who inject drugs (PWID). Following an HIV outbreak among PWID in Scott County, Indiana in 2015,[5] the US Centers for Disease Control and Prevention (CDC) conducted a study to identify indicator variables associated with injection drug use in order to determine which counties may be vulnerable to new or increasing rates of HIV or HCV among PWID.[6] In 2019, Washington performed a similar analysis and added opioid overdose as an outcome since injection drug use is associated with a higher risk of overdose than non-injection use.[7]

Results: Select indicators used in the CDC and Washington State models are shown in the table, with the corresponding values for Washington State and the profiled county.

Next Steps: Indicators can be tracked on the county level to inform prevention efforts within WA, and to better understand how social determinants impact county-level health outcomes. Strategic approaches, including increased HIV and HCV testing, should be supported at the county level as needed. Future work will assess additional years of data and changes in indicators and outcomes over time.

	WA State			Kittitas		
Indicator	**2016**	**2018**	**Change**	**2016**	**2018**	**Change**
Population & Density						
Population	7,183,700	7,427,570	3.4%	43,710	45,600	4.3%
Population per square mile	108	112	4	19	20	1
Urban-rural classification	N/A			5	5	0
Sociodemographics						
Unemployment rate	6.8%	5.3%	-1.5%	6.7%	6.0%	-0.7%
% With vehicle access	93%	93%	0%	94%	96%	1.7%
% Uninsured	9.8%	6.8%	-3.0%	11.0%	6.6%	-4.4%
% No high school diploma	6.3%	6.0%	-0.3%	5.5%	4.7%	-0.8%
Poverty rate	6.7%	6.2%	-0.5%	7.4%	6.6%	-0.8%
Income per capita	$32,999	$39,119	$6,120	$25,147	$27,948	$2,801
% Non-Hispanic White	70%	68%	-2.0%	84.6%	84.1%	-0.5%
Drug Availability & Outcomes						
In Drug Trafficking Zone	N/A			No		
All drug deaths per 100,000	15	14	-1	5	2	-2
Opioid hospitalizations per 100,000	25	19	-6	11	7	-4
Opioid deaths per 100,000	10	9	-1	2	1	-1
Provider Resources						
Mental health providers per 100,000	248	293	45	126	147	21
Specialist providers[1] per 100,000	8	9	1	0	2	2
Transmissible Injection-Related Infections						
HIV cases per 100,000	174	181	7	64	55	-9
HCV[2] cases per 100,000	57	59	2	16	29	12

[1] Specialists included doctors board certified in gastroenterology, hepatology, infectious disease, or addiction medicine.

[2] HCV cases included all acute cases and chronic cases in persons born after 1965.

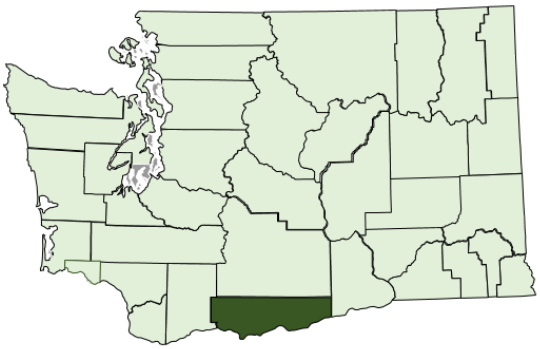
Kittitas County has certain vulnerabilities, including higher rates of unemployment and poverty than Washington State.

The rate of deaths related to opioids decreased in both Washington State and Kittitas County from 2016 to 2018.

References: *1. CDC Opioid Overdose: Understanding the Epidemic. 2. NIDA. Washington Opioid Summary. 3. CDC. CDC Estimates Nearly 2.4 Million Americans Living with Hepatitis C. 2018 4. WA DOH. Washington State Communicable Disease Report 2017. 2017. 5. Peters PJ, et al. HIV Infection Linked to Injection Use of Oxymorphone in Indiana, 2014-2015. NEJM 2016. 6.Van Handel MM, et al. County-Level Vulnerability Assessment for Rapid Dissemination of HIV or HCV Infections Among Persons Who Inject Drugs, United States. JAIDS. 2016 7. Mathers BM, et al. Mortality among people who inject drugs: a systematic review and meta-analysis. Bulletin of the WHO. 2013. 8. Rickles M et al. Tennessee's In-state Vulnerability Assessment for a "Rapid Dissemination of Human Immunodeficiency Virus or Hepatitis C Virus Infection" Event Utilizing Data About the Opioid Epidemic. CID. 2018.*

Washington County Profiles of Social Determinants of Health, HIV, Hepatitis C, and Opioid Overdose Among People Who Inject Drugs

KLICKITAT COUNTY



Background: Opioid use, hepatitis C (HCV), and overdose deaths are increasing in the United States and Washington State.[1-4] There is concern for rapid dissemination of HIV, HCV, and opioid overdose among people who inject drugs (PWID). Following an HIV outbreak among PWID in Scott County, Indiana in 2015,[5] the US Centers for Disease Control and Prevention (CDC) conducted a study to identify indicator variables associated with injection drug use in order to determine which counties may be vulnerable to new or increasing rates of HIV or HCV among PWID.[6] In 2019, Washington performed a similar analysis and added opioid overdose as an outcome since injection drug use is associated with a higher risk of overdose than non-injection use.[7]

Results: Select indicators used in the CDC and Washington State models are shown in the table, with the corresponding values for Washington State and the profiled county.

Next Steps: Indicators can be tracked on the county level to inform prevention efforts within WA, and to better understand how social determinants impact county-level health outcomes. Strategic approaches, including increased HIV and HCV testing, should be supported at the county level as needed. Future work will assess additional years of data and changes in indicators and outcomes over time.

	WA State			Klickitat		
Indicator	**2016**	**2018**	**Change**	**2016**	**2018**	**Change**
Population & Density						
Population	7,183,700	7,427,570	3.4%	21,270	21,980	3.3%
Population per square mile	108	112	4	11	12	0
Urban-rural classification	N/A			6	6	0
Sociodemographics						
Unemployment rate	6.8%	5.3%	-1.5%	5.4%	6.2%	0.8%
% With vehicle access	93%	93%	0%	96%	96%	-0.5%
% Uninsured	9.8%	6.8%	-3.0%	9.4%	7.9%	-1.5%
% No high school diploma	6.3%	6.0%	-0.3%	9.5%	8.7%	-0.8%
Poverty rate	6.7%	6.2%	-0.5%	8.2%	9.0%	0.8%
Income per capita	$32,999	$39,119	$6,120	$23,227	$26,128	$2,901
% Non-Hispanic White	70%	68%	-2.0%	82.3%	82.2%	-0.1%
Drug Availability & Outcomes						
In Drug Trafficking Zone	N/A			No		
All drug deaths per 100,000	15	14	-1	24	9	-14
Opioid hospitalizations per 100,000	25	19	-6	9	0	-9
Opioid deaths per 100,000	10	9	-1	0	0	0
Provider Resources						
Mental health providers per 100,000	248	293	45	132	127	-5
Specialist providers[1] per 100,000	8	9	1	5	5	0
Transmissible Injection-Related Infections						
HIV cases per 100,000	174	181	7	56	64	7
HCV[2] cases per 100,000	57	59	2	24	45	22

[1] Specialists included doctors board certified in gastroenterology, hepatology, infectious disease, or addiction medicine.

[2] HCV cases included all acute cases and chronic cases in persons born after 1965.

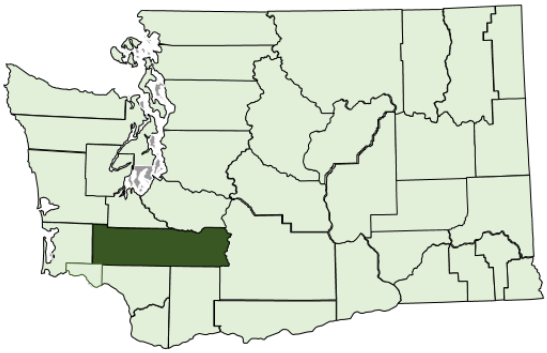
Klickitat County has certain vulnerabilities, including a higher rate of unemployment and less insurance coverage than Washington State.

The rate of drug deaths and hospitalizations related to opioids decreased in both Washington State and Klickitat County from 2016 to 2018.

***References**: 1. CDC Opioid Overdose: Understanding the Epidemic. 2. NIDA. Washington Opioid Summary. 3. CDC. CDC Estimates Nearly 2.4 Million Americans Living with Hepatitis C. 2018 4. WA DOH. Washington State Communicable Disease Report 2017. 2017. 5. Peters PJ, et al. HIV Infection Linked to Injection Use of Oxymorphone in Indiana, 2014-2015. NEJM 2016. 6.Van Handel MM, et al. County-Level Vulnerability Assessment for Rapid Dissemination of HIV or HCV Infections Among Persons Who Inject Drugs, United States. JAIDS. 2016 7. Mathers BM, et al. Mortality among people who inject drugs: a systematic review and meta-analysis. Bulletin of the WHO. 2013. 8. Rickles M et al. Tennessee's In-state Vulnerability Assessment for a "Rapid Dissemination of Human Immunodeficiency Virus or Hepatitis C Virus Infection" Event Utilizing Data About the Opioid Epidemic. CID. 2018.*

Washington County Profiles of Social Determinants of Health, HIV, Hepatitis C, and Opioid Overdose Among People Who Inject Drugs

LEWIS COUNTY



Background: Opioid use, hepatitis C (HCV), and overdose deaths are increasing in the United States and Washington State.[1-4] There is concern for rapid dissemination of HIV, HCV, and opioid overdose among people who inject drugs (PWID). Following an HIV outbreak among PWID in Scott County, Indiana in 2015,[5] the US Centers for Disease Control and Prevention (CDC) conducted a study to identify indicator variables associated with injection drug use in order to determine which counties may be vulnerable to new or increasing rates of HIV or HCV among PWID.[6] In 2019, Washington performed a similar analysis and added opioid overdose as an outcome since injection drug use is associated with a higher risk of overdose than non-injection use.[7]

Results: Select indicators used in the CDC and Washington State models are shown in the table, with the corresponding values for Washington State and the profiled county.

Next Steps: Indicators can be tracked on the county level to inform prevention efforts within WA, and to better understand how social determinants impact county-level health outcomes. Strategic approaches, including increased HIV and HCV testing, should be supported at the county level as needed. Future work will assess additional years of data and changes in indicators and outcomes over time.

	WA State			Lewis		
Indicator	**2016**	**2018**	**Change**	**2016**	**2018**	**Change**
Population & Density						
Population	7,183,700	7,427,570	3.4%	76,890	78,380	1.9%
Population per square mile	108	112	4	11	12	0
Urban-rural classification	N/A			6	6	0
Sociodemographics						
Unemployment rate	6.8%	5.3%	-1.5%	5.4%	6.2%	0.8%
% With vehicle access	93%	93%	0%	96%	96%	-0.5%
% Uninsured	9.8%	6.8%	-3.0%	9.4%	7.9%	-1.5%
% No high school diploma	6.3%	6.0%	-0.3%	9.5%	8.7%	-0.8%
Poverty rate	6.7%	6.2%	-0.5%	8.2%	9.0%	0.8%
Income per capita	$32,999	$39,119	$6,120	$23,227	$26,128	$2,901
% Non-Hispanic White	70%	68%	-2.0%	82.3%	82.2%	-0.1%
Drug Availability & Outcomes						
In Drug Trafficking Zone	N/A			No	No	0
All drug deaths per 100,000	15	14	-1	24	9	-14
Opioid hospitalizations per 100,000	25	19	-6	26	17	-9
Opioid deaths per 100,000	10	9	-1	0	0	0
Provider Resources						
Mental health providers per 100,000	248	293	45	132	127	-5
Specialist providers[1] per 100,000	8	9	1	5	5	0
Transmissible Injection-Related Infections						
HIV cases per 100,000	174	181	7	56	64	7
HCV[2] cases per 100,000	57	59	2	24	45	22

[1] Specialists included doctors board certified in gastroenterology, hepatology, infectious disease, or addiction medicine.

[2] HCV cases included all acute cases and chronic cases in persons born after 1965.

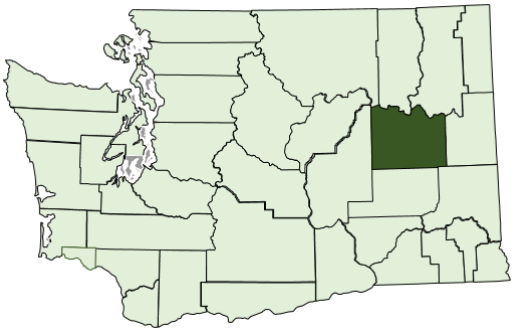
Lewis County has certain vulnerabilities, including a higher rate of unemployment and less insurance coverage than Washington State.

The rate of drug deaths and hospitalizations related to opioids decreased in both Washington State and Lewis County from 2016 to 2018.

***References**: 1. CDC Opioid Overdose: Understanding the Epidemic. 2. NIDA. Washington Opioid Summary. 3. CDC. CDC Estimates Nearly 2.4 Million Americans Living with Hepatitis C. 2018 4. WA DOH. Washington State Communicable Disease Report 2017. 2017. 5. Peters PJ, et al. HIV Infection Linked to Injection Use of Oxymorphone in Indiana, 2014-2015. NEJM 2016. 6.Van Handel MM, et al. County-Level Vulnerability Assessment for Rapid Dissemination of HIV or HCV Infections Among Persons Who Inject Drugs, United States. JAIDS. 2016 7. Mathers BM, et al. Mortality among people who inject drugs: a systematic review and meta-analysis. Bulletin of the WHO. 2013. 8. Rickles M et al. Tennessee's In-state Vulnerability Assessment for a "Rapid Dissemination of Human Immunodeficiency Virus or Hepatitis C Virus Infection" Event Utilizing Data About the Opioid Epidemic. CID. 2018.*

Washington County Profiles of Social Determinants of Health, HIV, Hepatitis C, and Opioid Overdose Among People Who Inject Drugs

LINCOLN COUNTY



Background: Opioid use, hepatitis C (HCV), and overdose deaths are increasing in the United States and Washington State.[1-4] There is concern for rapid dissemination of HIV, HCV, and opioid overdose among people who inject drugs (PWID). Following an HIV outbreak among PWID in Scott County, Indiana in 2015,[5] the US Centers for Disease Control and Prevention (CDC) conducted a study to identify indicator variables associated with injection drug use in order to determine which counties may be vulnerable to new or increasing rates of HIV or HCV among PWID.[6] In 2019, Washington performed a similar analysis and added opioid overdose as an outcome since injection drug use is associated with a higher risk of overdose than non-injection use.[7]

Results: Select indicators used in the CDC and Washington State models are shown in the table, with the corresponding values for Washington State and the profiled county.

Next Steps: Indicators can be tracked on the county level to inform prevention efforts within WA, and to better understand how social determinants impact county-level health outcomes. Strategic approaches, including increased HIV and HCV testing, should be supported at the county level as needed. Future work will assess additional years of data and changes in indicators and outcomes over time.

	WA State			Lincoln		
Indicator	**2016**	**2018**	**Change**	**2016**	**2018**	**Change**
Population & Density						
Population	7,183,700	7,427,570	3.4%	10,640	10,810	1.6%
Population per square mile	108	112	4	5	5	0
Urban-rural classification	N/A			6	6	0
Sociodemographics						
Unemployment rate	6.8%	5.3%	-1.5%	4.1%	4.3%	0.2%
% With vehicle access	93%	93%	0%	97%	98%	1.1%
% Uninsured	9.8%	6.8%	-3.0%	8.3%	5.1%	-3.2%
% No high school diploma	6.3%	6.0%	-0.3%	6.1%	6.0%	0.0%
Poverty rate	6.7%	6.2%	-0.5%	8.3%	7.0%	-1.2%
Income per capita	$32,999	$39,119	$6,120	$25,382	$27,730	$2,348
% Non-Hispanic White	70%	68%	-2.0%	92.1%	91.5%	-0.6%
Drug Availability & Outcomes						
In Drug Trafficking Zone	N/A			No	No	0
All drug deaths per 100,000	15	14	-1	38	0	-38
Opioid hospitalizations per 100,000	25	19	-6	47	9	-38
Opioid deaths per 100,000	10	9	-1	2	0	-2
Provider Resources						
Mental health providers per 100,000	248	293	45	47	68	21
Specialist providers[1] per 100,000	8	9	1	0	0	0
Transmissible Injection-Related Infections						
HIV cases per 100,000	174	181	7	75	46	-29
HCV[2] cases per 100,000	57	59	2	28	74	46

[1] Specialists included doctors board certified in gastroenterology, hepatology, infectious disease, or addiction medicine.

[2] HCV cases included all acute cases and chronic cases in persons born after 1965.

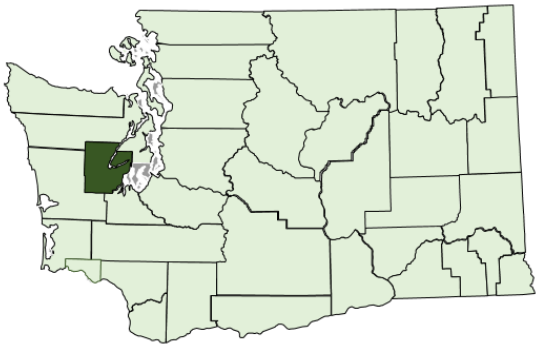
Lincoln County has certain vulnerabilities, including a higher rate of HCV infection than Washington State.

The rate of drug deaths and hospitalizations related to opioids decreased in both Washington State and Lincoln County from 2016 to 2018.

References: *1. CDC Opioid Overdose: Understanding the Epidemic. 2. NIDA. Washington Opioid Summary. 3. CDC. CDC Estimates Nearly 2.4 Million Americans Living with Hepatitis C. 2018 4. WA DOH. Washington State Communicable Disease Report 2017. 2017. 5. Peters PJ, et al. HIV Infection Linked to Injection Use of Oxymorphone in Indiana, 2014-2015. NEJM 2016. 6.Van Handel MM, et al. County-Level Vulnerability Assessment for Rapid Dissemination of HIV or HCV Infections Among Persons Who Inject Drugs, United States. JAIDS. 2016 7. Mathers BM, et al. Mortality among people who inject drugs: a systematic review and meta-analysis. Bulletin of the WHO. 2013. 8. Rickles M et al. Tennessee's In-state Vulnerability Assessment for a "Rapid Dissemination of Human Immunodeficiency Virus or Hepatitis C Virus Infection" Event Utilizing Data About the Opioid Epidemic. CID. 2018.*

Washington County Profiles of Social Determinants of Health, HIV, Hepatitis C, and Opioid Overdose Among People Who Inject Drugs

MASON COUNTY



Background: Opioid use, hepatitis C (HCV), and overdose deaths are increasing in the United States and Washington State.[1-4] There is concern for rapid dissemination of HIV, HCV, and opioid overdose among people who inject drugs (PWID). Following an HIV outbreak among PWID in Scott County, Indiana in 2015,[5] the US Centers for Disease Control and Prevention (CDC) conducted a study to identify indicator variables associated with injection drug use in order to determine which counties may be vulnerable to new or increasing rates of HIV or HCV among PWID.[6] In 2019, Washington performed a similar analysis and added opioid overdose as an outcome since injection drug use is associated with a higher risk of overdose than non-injection use.[7]

Results: Select indicators used in the CDC and Washington State models are shown in the table, with the corresponding values for Washington State and the profiled county.

Next Steps: Indicators can be tracked on the county level to inform prevention efforts within WA, and to better understand how social determinants impact county-level health outcomes. Strategic approaches, including increased HIV and HCV testing, should be supported at the county level as needed. Future work will assess additional years of data and changes in indicators and outcomes over time.

	WA State			Mason		
Indicator	**2016**	**2018**	**Change**	**2016**	**2018**	**Change**
Population & Density						
Population	7,183,700	7,427,570	3.4%	62,320	64,020	2.7%
Population per square mile	108	112	4	65	67	2
Urban-rural classification	N/A			5	5	0
Sociodemographics						
Unemployment rate	6.8%	5.3%	-1.5%	10.8%	7.5%	-3.3%
% With vehicle access	93%	93%	0%	96%	96%	0.4%
% Uninsured	9.8%	6.8%	-3.0%	13.2%	7.8%	-5.4%
% No high school diploma	6.3%	6.0%	-0.3%	9.0%	9.0%	0.0%
Poverty rate	6.7%	6.2%	-0.5%	9.6%	8.7%	-0.9%
Income per capita	$32,999	$39,119	$6,120	$25,628	$27,253	$1,625
% Non-Hispanic White	70%	68%	-2.0%	81.7%	80.9%	-0.8%
Drug Availability & Outcomes						
In Drug Trafficking Zone	N/A			No	No	0
All drug deaths per 100,000	15	14	-1	18	9	-8
Opioid hospitalizations per 100,000	25	19	-6	39	23	-16
Opioid deaths per 100,000	10	9	-1	8	3	-5
Provider Resources						
Mental health providers per 100,000	248	293	45	82	121	39
Specialist providers[1] per 100,000	8	9	1	5	2	-3
Transmissible Injection-Related Infections						
HIV cases per 100,000	174	181	7	104	102	-3
HCV[2] cases per 100,000	57	59	2	77	347	270

[1] Specialists included doctors board certified in gastroenterology, hepatology, infectious disease, or addiction medicine.

[2] HCV cases included all acute cases and chronic cases in persons born after 1965.

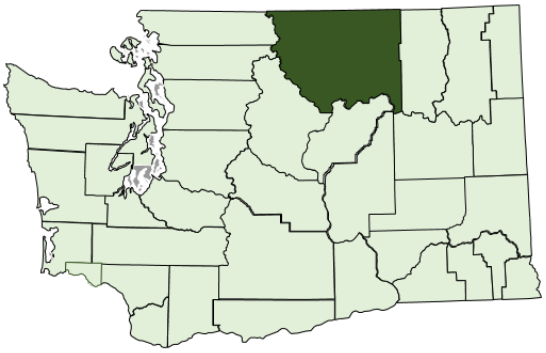
Mason County has certain vulnerabilities, including a higher rate of HCV infection than Washington State.

The rate of drug deaths and hospitalizations related to opioids decreased in both Washington State and Mason County from 2016 to 2018.

***References**: 1. CDC Opioid Overdose: Understanding the Epidemic. 2. NIDA. Washington Opioid Summary. 3. CDC. CDC Estimates Nearly 2.4 Million Americans Living with Hepatitis C. 2018 4. WA DOH. Washington State Communicable Disease Report 2017. 2017. 5. Peters PJ, et al. HIV Infection Linked to Injection Use of Oxymorphone in Indiana, 2014-2015. NEJM 2016. 6.Van Handel MM, et al. County-Level Vulnerability Assessment for Rapid Dissemination of HIV or HCV Infections Among Persons Who Inject Drugs, United States. JAIDS. 2016 7. Mathers BM, et al. Mortality among people who inject drugs: a systematic review and meta-analysis. Bulletin of the WHO. 2013. 8. Rickles M et al. Tennessee's In-state Vulnerability Assessment for a "Rapid Dissemination of Human Immunodeficiency Virus or Hepatitis C Virus Infection" Event Utilizing Data About the Opioid Epidemic. CID. 2018.*

Washington County Profiles of Social Determinants of Health, HIV, Hepatitis C, and Opioid Overdose Among People Who Inject Drugs

OKANOGAN COUNTY



Background: Opioid use, hepatitis C (HCV), and overdose deaths are increasing in the United States and Washington State.[1-4] There is concern for rapid dissemination of HIV, HCV, and opioid overdose among people who inject drugs (PWID). Following an HIV outbreak among PWID in Scott County, Indiana in 2015,[5] the US Centers for Disease Control and Prevention (CDC) conducted a study to identify indicator variables associated with injection drug use in order to determine which counties may be vulnerable to new or increasing rates of HIV or HCV among PWID.[6] In 2019, Washington performed a similar analysis and added opioid overdose as an outcome since injection drug use is associated with a higher risk of overdose than non-injection use.[7]

Results: Select indicators used in the CDC and Washington State models are shown in the table, with the corresponding values for Washington State and the profiled county.

Next Steps: Indicators can be tracked on the county level to inform prevention efforts within WA, and to better understand how social determinants impact county-level health outcomes. Strategic approaches, including increased HIV and HCV testing, should be supported at the county level as needed. Future work will assess additional years of data and changes in indicators and outcomes over time.

	WA State			Okanogan		
Indicator	**2016**	**2018**	**Change**	**2016**	**2018**	**Change**
Population & Density						
Population	7,183,700	7,427,570	3.4%	41,730	42,490	1.8%
Population per square mile	108	112	4	8	8	0
Urban-rural classification	N/A			6	6	0
Sociodemographics						
Unemployment rate	6.8%	5.3%	-1.5%	8.1%	6.4%	-1.7%
% With vehicle access	93%	93%	0%	95%	96%	0.2%
% Uninsured	9.8%	6.8%	-3.0%	16.6%	12.0%	-4.5%
% No high school diploma	6.3%	6.0%	-0.3%	12.2%	11.3%	-0.9%
Poverty rate	6.7%	6.2%	-0.5%	11.8%	11.1%	-0.7%
Income per capita	$32,999	$39,119	$6,120	$22,544	$23,961	$1,417
% Non-Hispanic White	70%	68%	-2.0%	66.3%	65.4%	-0.9%
Drug Availability & Outcomes						
In Drug Trafficking Zone	N/A			No	No	0
All drug deaths per 100,000	15	14	-1	10	24	14
Opioid hospitalizations per 100,000	25	19	-6	22	14	-8
Opioid deaths per 100,000	10	9	-1	3	5	2
Provider Resources						
Mental health providers per 100,000	248	293	45	242	260	18
Specialist providers[1] per 100,000	8	9	1	2	7	5
Transmissible Injection-Related Infections						
HIV cases per 100,000	174	181	7	62	56	-6
HCV[2] cases per 100,000	57	59	2	24	49	25

[1] Specialists included doctors board certified in gastroenterology, hepatology, infectious disease, or addiction medicine.

[2] HCV cases included all acute cases and chronic cases in persons born after 1965.

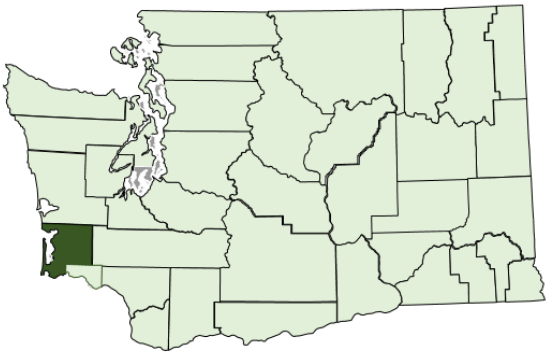
Okanogan County has certain vulnerabilities, including a higher rate of unemployment and drug-related deaths than Washington State.

While the rate of drug-related deaths declined in Washington State from 2016 to 2018, it increased in Okanogan County.

References: *1. CDC Opioid Overdose: Understanding the Epidemic. 2. NIDA. Washington Opioid Summary. 3. CDC. CDC Estimates Nearly 2.4 Million Americans Living with Hepatitis C. 2018 4. WA DOH. Washington State Communicable Disease Report 2017. 2017. 5. Peters PJ, et al. HIV Infection Linked to Injection Use of Oxymorphone in Indiana, 2014-2015. NEJM 2016. 6.Van Handel MM, et al. County-Level Vulnerability Assessment for Rapid Dissemination of HIV or HCV Infections Among Persons Who Inject Drugs, United States. JAIDS. 2016 7. Mathers BM, et al. Mortality among people who inject drugs: a systematic review and meta-analysis. Bulletin of the WHO. 2013. 8. Rickles M et al. Tennessee's In-state Vulnerability Assessment for a "Rapid Dissemination of Human Immunodefi-*

Washington County Profiles of Social Determinants of Health, HIV, Hepatitis C, and Opioid Overdose Among People Who Inject Drugs

PACIFIC COUNTY



Background: Opioid use, hepatitis C (HCV), and overdose deaths are increasing in the United States and Washington State.[1-4] There is concern for rapid dissemination of HIV, HCV, and opioid overdose among people who inject drugs (PWID). Following an HIV outbreak among PWID in Scott County, Indiana in 2015,[5] the US Centers for Disease Control and Prevention (CDC) conducted a study to identify indicator variables associated with injection drug use in order to determine which counties may be vulnerable to new or increasing rates of HIV or HCV among PWID.[6] In 2019, Washington performed a similar analysis and added opioid overdose as an outcome since injection drug use is associated with a higher risk of overdose than non-injection use.[7]

Results: Select indicators used in the CDC and Washington State models are shown in the table, with the corresponding values for Washington State and the profiled county.

Next Steps: Indicators can be tracked on the county level to inform prevention efforts within WA, and to better understand how social determinants impact county-level health outcomes. Strategic approaches, including increased HIV and HCV testing, should be supported at the county level as needed. Future work will assess additional years of data and changes in indicators and outcomes over time.

	WA State			Pacific		
Indicator	**2016**	**2018**	**Change**	**2016**	**2018**	**Change**
Population & Density						
Population	7,183,700	7,427,570	3.4%	21,180	21,420	1.1%
Population per square mile	108	112	4	23	23	0
Urban-rural classification	N/A			6	6	0
Sociodemographics						
Unemployment rate	6.8%	5.3%	-1.5%	7.7%	6.8%	-0.9%
% With vehicle access	93%	93%	0%	94%	94%	0.0%
% Uninsured	9.8%	6.8%	-3.0%	11.0%	7.3%	-3.7%
% No high school diploma	6.3%	6.0%	-0.3%	8.7%	9.2%	0.5%
Poverty rate	6.7%	6.2%	-0.5%	12.0%	11.6%	-0.4%
Income per capita	$32,999	$39,119	$6,120	$22,187	$24,474	$2,287
% Non-Hispanic White	70%	68%	-2.0%	82.8%	82.2%	-0.6%
Drug Availability & Outcomes						
In Drug Trafficking Zone	N/A			No	No	0
All drug deaths per 100,000	15	14	-1	19	14	-5
Opioid hospitalizations per 100,000	25	19	-6	5	28	23
Opioid deaths per 100,000	10	9	-1	3	1	-2
Provider Resources						
Mental health providers per 100,000	248	293	45	184	212	28
Specialist providers[1] per 100,000	8	9	1	0	0	0
Transmissible Injection-Related Infections						
HIV cases per 100,000	174	181	7	127	131	3
HCV[2] cases per 100,000	57	59	2	47	131	84

[1] Specialists included doctors board certified in gastroenterology, hepatology, infectious disease, or addiction medicine.

[2] HCV cases included all acute cases and chronic cases in persons born after 1965.

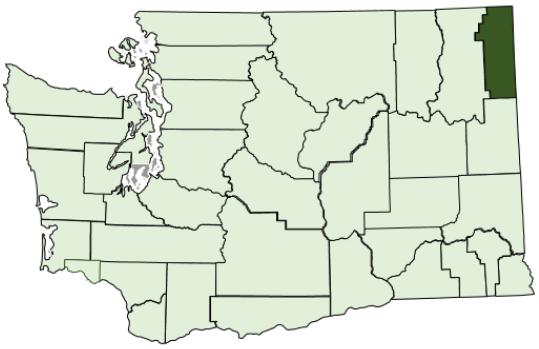
Pacific County has certain vulnerabilities, including a higher rate of unemployment and HCV infections than Washington State.

While the rate of opioid-related hospitalizations declined in Washington State from 2016 to 2018, it increased in Pacific County.

***References**: 1. CDC Opioid Overdose: Understanding the Epidemic. 2. NIDA. Washington Opioid Summary. 3. CDC. CDC Estimates Nearly 2.4 Million Americans Living with Hepatitis C. 2018 4. WA DOH. Washington State Communicable Disease Report 2017. 2017. 5. Peters PJ, et al. HIV Infection Linked to Injection Use of Oxymorphone in Indiana, 2014-2015. NEJM 2016. 6.Van Handel MM, et al. County-Level Vulnerability Assessment for Rapid Dissemination of HIV or HCV Infections Among Persons Who Inject Drugs, United States. JAIDS. 2016 7. Mathers BM, et al. Mortality among people who inject drugs: a systematic review and meta-analysis. Bulletin of the WHO. 2013. 8. Rickles M et*

Washington County Profiles of Social Determinants of Health, HIV, Hepatitis C, and Opioid Overdose Among People Who Inject Drugs

PEND OREILLE COUNTY



Background: Opioid use, hepatitis C (HCV), and overdose deaths are increasing in the United States and Washington State.[1-4] There is concern for rapid dissemination of HIV, HCV, and opioid overdose among people who inject drugs (PWID). Following an HIV outbreak among PWID in Scott County, Indiana in 2015,[5] the US Centers for Disease Control and Prevention (CDC) conducted a study to identify indicator variables associated with injection drug use in order to determine which counties may be vulnerable to new or increasing rates of HIV or HCV among PWID.[6] In 2019, Washington performed a similar analysis and added opioid overdose as an outcome since injection drug use is associated with a higher risk of overdose than non-injection use.[7]

Results: Select indicators used in the CDC and Washington State models are shown in the table, with the corresponding values for Washington State and the profiled county.

Next Steps: Indicators can be tracked on the county level to inform prevention efforts within WA, and to better understand how social determinants impact county-level health outcomes. Strategic approaches, including increased HIV and HCV testing, should be supported at the county level as needed. Future work will assess additional years of data and changes in indicators and outcomes over time.

	WA State			Pend Oreille		
Indicator	**2016**	**2018**	**Change**	**2016**	**2018**	**Change**
Population & Density						
Population	7,183,700	7,427,570	3.4%	13,290	13,540	1.9%
Population per square mile	108	112	4	9	10	0
Urban-rural classification	N/A			3	3	0
Sociodemographics						
Unemployment rate	6.8%	5.3%	-1.5%	9.1%	6.0%	-3.1%
% With vehicle access	93%	93%	0%	95%	95%	0.5%
% Uninsured	9.8%	6.8%	-3.0%	10.5%	7.3%	-3.2%
% No high school diploma	6.3%	6.0%	-0.3%	7.8%	7.4%	-0.3%
Poverty rate	6.7%	6.2%	-0.5%	12.4%	10.0%	-2.4%
Income per capita	$32,999	$39,119	$6,120	$24,163	$26,739	$2,576
% Non-Hispanic White	70%	68%	-2.0%	89.0%	88.6%	-0.4%
Drug Availability & Outcomes						
In Drug Trafficking Zone	N/A			No		
All drug deaths per 100,000	15	14	-1	15	0	-15
Opioid hospitalizations per 100,000	25	19	-6	23	37	14
Opioid deaths per 100,000	10	9	-1	1	0	-1
Provider Resources						
Mental health providers per 100,000	248	293	45	120	168	47
Specialist providers[1] per 100,000	8	9	1	0	0	0
Transmissible Injection-Related Infections						
HIV cases per 100,000	174	181	7	83	66	-16
HCV[2] cases per 100,000	57	59	2	45	74	29

[1] Specialists included doctors board certified in gastroenterology, hepatology, infectious disease, or addiction medicine.

[2] HCV cases included all acute cases and chronic cases in persons born after 1965.

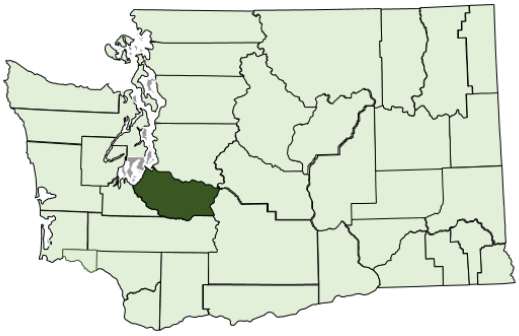
Pend Oreille County has certain vulnerabilities, including a higher rate of unemployment and HCV infections than Washington State.

While the rate of opioid-related hospitalizations declined in Washington State from 2016 to 2018, it increased in Pend Oreille County.

***References**: 1. CDC Opioid Overdose: Understanding the Epidemic. 2. NIDA. Washington Opioid Summary. 3. CDC. CDC Estimates Nearly 2.4 Million Americans Living with Hepatitis C. 2018 4. WA DOH. Washington State Communicable Disease Report 2017. 2017. 5. Peters PJ, et al. HIV Infection Linked to Injection Use of Oxymorphone in Indiana, 2014-2015. NEJM 2016. 6.Van Handel MM, et al. County-Level Vulnerability Assessment for Rapid Dissemination of HIV or HCV Infections Among Persons Who Inject Drugs, United States. JAIDS. 2016 7. Mathers BM, et al. Mortality among people who inject drugs: a systematic review and meta-analysis. Bulletin of the WHO. 2013. 8. Rickles M et al. Tennessee's In-state Vulnerability Assessment for a "Rapid Dissemination of Human Immunodeficiency Virus or Hepatitis C Virus Infection" Event Utilizing Data About the Opioid Epidemic. CID. 2018.*

Washington County Profiles of Social Determinants of Health, HIV, Hepatitis C, and Opioid Overdose Among People Who Inject Drugs

PIERCE COUNTY



Background: Opioid use, hepatitis C (HCV), and overdose deaths are increasing in the United States and Washington State.[1-4] There is concern for rapid dissemination of HIV, HCV, and opioid overdose among people who inject drugs (PWID). Following an HIV outbreak among PWID in Scott County, Indiana in 2015,[5] the US Centers for Disease Control and Prevention (CDC) conducted a study to identify indicator variables associated with injection drug use in order to determine which counties may be vulnerable to new or increasing rates of HIV or HCV among PWID.[6] In 2019, Washington performed a similar analysis and added opioid overdose as an outcome since injection drug use is associated with a higher risk of overdose than non-injection use.[7]

Results: Select indicators used in the CDC and Washington State models are shown in the table, with the corresponding values for Washington State and the profiled county.

Next Steps: Indicators can be tracked on the county level to inform prevention efforts within WA, and to better understand how social determinants impact county-level health outcomes. Strategic approaches, including increased HIV and HCV testing, should be supported at the county level as needed. Future work will assess additional years of data and changes in indicators and outcomes over time.

	WA State			Pierce		
Indicator	**2016**	**2018**	**Change**	**2016**	**2018**	**Change**
Population & Density						
Population	7,183,700	7,427,570	3.4%	844,490	872,220	3.3%
Population per square mile	108	112	4	506	522	17
Urban-rural classification	N/A			2	2	0
Sociodemographics						
Unemployment rate	6.8%	5.3%	-1.5%	7.8%	5.8%	-2.0%
% With vehicle access	93%	93%	0%	94%	95%	0.4%
% Uninsured	9.8%	6.8%	-3.0%	9.4%	6.5%	-2.9%
% No high school diploma	6.3%	6.0%	-0.3%	5.9%	5.8%	-0.1%
Poverty rate	6.7%	6.2%	-0.5%	6.8%	6.2%	-0.6%
Income per capita	$32,999	$39,119	$6,120	$29,750	$32,874	$3,124
% Non-Hispanic White	70%	68%	-2.0%	68.6%	67.3%	-1.3%
Drug Availability & Outcomes						
In Drug Trafficking Zone	N/A			Yes		
All drug deaths per 100,000	15	14	-1	18	13	-4
Opioid hospitalizations per 100,000	25	19	-6	27	26	-1
Opioid deaths per 100,000	10	9	-1	94	72	-22
Provider Resources						
Mental health providers per 100,000	248	293	45	342	388	46
Specialist providers[1] per 100,000	8	9	1	5	7	1
Transmissible Injection-Related Infections						
HIV cases per 100,000	174	181	7	161	170	9
HCV[2] cases per 100,000	57	59	2	55	55	0

[1] Specialists included doctors board certified in gastroenterology, hepatology, infectious disease, or addiction medicine.

[2] HCV cases included all acute cases and chronic cases in persons born after 1965.

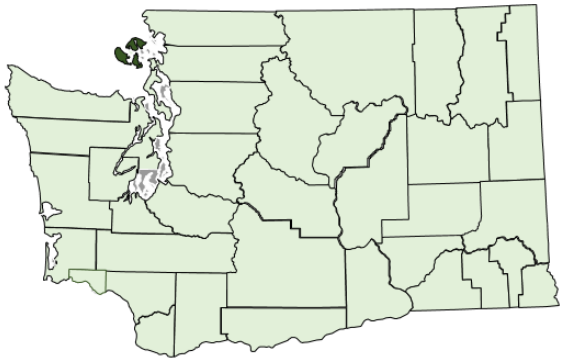
Pierce County has certain vulnerabilities, including a higher rate of unemployment and opioid-related hospitalizations than Washington State.

The rate of drug-related deaths and opioid-related hospitalizations declined in Washington State and Pierce County from 2016 to 2018.

***References**: 1. CDC Opioid Overdose: Understanding the Epidemic. 2. NIDA. Washington Opioid Summary. 3. CDC. CDC Estimates Nearly 2.4 Million Americans Living with Hepatitis C. 2018 4. WA DOH. Washington State Communicable Disease Report 2017. 2017. 5. Peters PJ, et al. HIV Infection Linked to Injection Use of Oxymorphone in Indiana, 2014-2015. NEJM 2016. 6.Van Handel MM, et al. County-Level Vulnerability Assessment for Rapid Dissemination of HIV or HCV Infections Among Persons Who Inject Drugs, United States. JAIDS. 2016 7. Mathers BM, et al. Mortality among people who inject drugs: a systematic review and meta-analysis. Bulletin of the WHO. 2013. 8. Rickles M et al. Tennessee's In-state Vulnerability Assessment for a "Rapid Dissemination of Human Immunodeficiency Virus or Hepatitis C Virus Infection" Event Utilizing Data About the Opioid Epidemic. CID. 2018.*

Washington County Profiles of Social Determinants of Health, HIV, Hepatitis C, and Opioid Overdose Among People Who Inject Drugs

SAN JUAN COUNTY



Background: Opioid use, hepatitis C (HCV), and overdose deaths are increasing in the United States and Washington State.[1-4] There is concern for rapid dissemination of HIV, HCV, and opioid overdose among people who inject drugs (PWID). Following an HIV outbreak among PWID in Scott County, Indiana in 2015,[5] the US Centers for Disease Control and Prevention (CDC) conducted a study to identify indicator variables associated with injection drug use in order to determine which counties may be vulnerable to new or increasing rates of HIV or HCV among PWID.[6] In 2019, Washington performed a similar analysis and added opioid overdose as an outcome since injection drug use is associated with a higher risk of overdose than non-injection use.[7]

Results: Select indicators used in the CDC and Washington State models are shown in the table, with the corresponding values for Washington State and the profiled county.

Next Steps: Indicators can be tracked on the county level to inform prevention efforts within WA, and to better understand how social determinants impact county-level health outcomes. Strategic approaches, including increased HIV and HCV testing, should be supported at the county level as needed. Future work will assess additional years of data and changes in indicators and outcomes over time.

	WA State			San Juan		
Indicator	**2016**	**2018**	**Change**	**2016**	**2018**	**Change**
Population & Density						
Population	7,183,700	7,427,570	3.4%	16,320	16,810	3%
Population per square mile	108	112	4	94	97	3
Urban-rural classification	N/A			6	6	0
Sociodemographics						
Unemployment rate	6.8%	5.3%	-1.5%	5.1%	3.0%	-2.1%
% With vehicle access	93%	93%	0%	96%	96%	0.2%
% Uninsured	9.8%	6.8%	-3.0%	10.8%	6.9%	-3.8%
% No high school diploma	6.3%	6.0%	-0.3%	3.7%	3.2%	-0.5%
Poverty rate	6.7%	6.2%	-0.5%	7.1%	8.1%	1.0%
Income per capita	$32,999	$39,119	$6,120	$40,327	$42,307	$1,980
% Non-Hispanic White	70%	68%	-2.0%	89.1%	88.7%	-0.4%
Drug Availability & Outcomes						
In Drug Trafficking Zone	N/A			Yes		
All drug deaths per 100,000	15	14	-1	25	18	-7
Opioid hospitalizations per 100,000	25	19	-6	12	12	0
Opioid deaths per 100,000	10	9	-1	2	3	1
Provider Resources						
Mental health providers per 100,000	248	293	45	337	386	49
Specialist providers[1] per 100,000	8	9	1	6	0	-6
Transmissible Injection-Related Infections						
HIV cases per 100,000	174	181	7	135	131	-4
HCV[2] cases per 100,000	57	59	2	25	24	-1

[1] Specialists included doctors board certified in gastroenterology, hepatology, infectious disease, or addiction medicine.

[2] HCV cases included all acute cases and chronic cases in persons born after 1965.

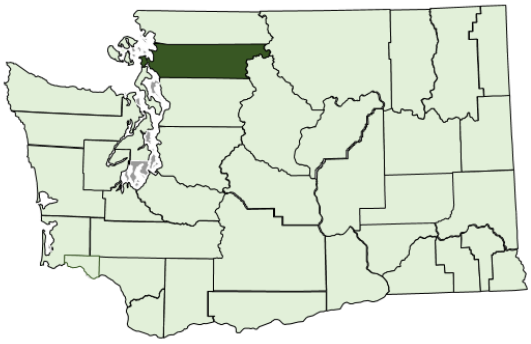
San Juan County has certain vulnerabilities, including a higher rate of poverty and drug-related deaths than Washington State.

The rate of drug-related deaths declined in Washington State and San Juan County from 2016 to 2018.

***References**: 1. CDC Opioid Overdose: Understanding the Epidemic. 2. NIDA. Washington Opioid Summary. 3. CDC. CDC Estimates Nearly 2.4 Million Americans Living with Hepatitis C. 2018 4. WA DOH. Washington State Communicable Disease Report 2017. 2017. 5. Peters PJ, et al. HIV Infection Linked to Injection Use of Oxymorphone in Indiana, 2014-2015. NEJM 2016. 6.Van Handel MM, et al. County-Level Vulnerability Assessment for Rapid Dissemination of HIV or HCV Infections Among Persons Who Inject Drugs, United States. JAIDS. 2016 7. Mathers BM, et al. Mortality among people who inject drugs: a systematic review and meta-analysis. Bulletin of the WHO. 2013. 8. Rickles M et al. Tennessee's In-state Vulnerability Assessment for a "Rapid Dissemination of Human Immunodeficiency Virus or Hepatitis C Virus Infection" Event Utilizing Data About the Opioid Epidemic. CID. 2018.*

Washington County Profiles of Social Determinants of Health, HIV, Hepatitis C, and Opioid Overdose Among People Who Inject Drugs

SKAGIT COUNTY



Background: Opioid use, hepatitis C (HCV), and overdose deaths are increasing in the United States and Washington State.[1-4] There is concern for rapid dissemination of HIV, HCV, and opioid overdose among people who inject drugs (PWID). Following an HIV outbreak among PWID in Scott County, Indiana in 2015,[5] the US Centers for Disease Control and Prevention (CDC) conducted a study to identify indicator variables associated with injection drug use in order to determine which counties may be vulnerable to new or increasing rates of HIV or HCV among PWID.[6] In 2019, Washington performed a similar analysis and added opioid overdose as an outcome since injection drug use is associated with a higher risk of overdose than non-injection use.[7]

Results: Select indicators used in the CDC and Washington State models are shown in the table, with the corresponding values for Washington State and the profiled county.

Next Steps: Indicators can be tracked on the county level to inform prevention efforts within WA, and to better understand how social determinants impact county-level health outcomes. Strategic approaches, including increased HIV and HCV testing, should be supported at the county level as needed. Future work will assess additional years of data and changes in indicators and outcomes over time.

	WA State			Skagit		
Indicator	**2016**	**2018**	**Change**	**2016**	**2018**	**Change**
Population & Density						
Population	7,183,700	7,427,570	3.4%	122,270	126,520	3.5%
Population per square mile	108	112	4	71	73	2
Urban-rural classification	N/A			4	4	0
Sociodemographics						
Unemployment rate	6.8%	5.3%	-1.5%	7.2%	5.8%	-1.4%
% With vehicle access	93%	93%	0%	95%	95%	0.1%
% Uninsured	9.8%	6.8%	-3.0%	10.9%	7.4%	-3.5%
% No high school diploma	6.3%	6.0%	-0.3%	7.6%	7.1%	-0.5%
Poverty rate	6.7%	6.2%	-0.5%	8.1%	7.2%	-0.9%
Income per capita	$32,999	$39,119	$6,120	$28,586	$31,822	$3,236
% Non-Hispanic White	70%	68%	-2.0%	75.5%	74.6%	-0.9%
Drug Availability & Outcomes						
In Drug Trafficking Zone	N/A			Yes		
All drug deaths per 100,000	15	14	-1	17	15	-2
Opioid hospitalizations per 100,000	25	19	-6	16	19	3
Opioid deaths per 100,000	10	9	-1	11	14	3
Provider Resources						
Mental health providers per 100,000	248	293	45	262	348	86
Specialist providers[1] per 100,000	8	9	1	10	9	-1
Transmissible Injection-Related Infections						
HIV cases per 100,000	174	181	7	76	74	-2
HCV[2] cases per 100,000	57	59	2	51	86	35

[1] Specialists included doctors board certified in gastroenterology, hepatology, infectious disease, or addiction medicine.

[2] HCV cases included all acute cases and chronic cases in persons born after 1965.

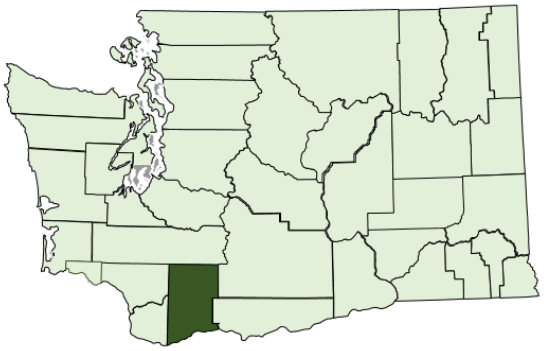
Skagit County has certain vulnerabilities, including a higher rate of unemployment and opioid-related deaths than Washington State.

While the rate of opioid-related deaths declined in Washington from 2016 to 2018, it increased in Skagit County.

References: *1. CDC Opioid Overdose: Understanding the Epidemic. 2. NIDA. Washington Opioid Summary. 3. CDC. CDC Estimates Nearly 2.4 Million Americans Living with Hepatitis C. 2018 4. WA DOH. Washington State Communicable Disease Report 2017. 2017. 5. Peters PJ, et al. HIV Infection Linked to Injection Use of Oxymorphone in Indiana, 2014-2015. NEJM 2016. 6.Van Handel MM, et al. County-Level Vulnerability Assessment for Rapid Dissemination of HIV or HCV Infections Among Persons Who Inject Drugs, United States. JAIDS. 2016 7. Mathers BM, et al. Mortality among people who inject drugs: a systematic review and meta-analysis. Bulletin of the WHO. 2013. 8. Rickles M et al. Tennessee's In-state Vulnerability Assessment for a "Rapid Dissemination of Human Immunodeficiency Virus or Hepatitis C Virus Infection" Event Utilizing Data About the Opioid Epidemic. CID. 2018.*

Washington County Profiles of Social Determinants of Health, HIV, Hepatitis C, and Opioid Overdose Among People Who Inject Drugs

SKAMANIA COUNTY



Background: Opioid use, hepatitis C (HCV), and overdose deaths are increasing in the United States and Washington State.[1-4] There is concern for rapid dissemination of HIV, HCV, and opioid overdose among people who inject drugs (PWID). Following an HIV outbreak among PWID in Scott County, Indiana in 2015,[5] the US Centers for Disease Control and Prevention (CDC) conducted a study to identify indicator variables associated with injection drug use in order to determine which counties may be vulnerable to new or increasing rates of HIV or HCV among PWID.[6] In 2019, Washington performed a similar analysis and added opioid overdose as an outcome since injection drug use is associated with a higher risk of overdose than non-injection use.[7]

Results: Select indicators used in the CDC and Washington State models are shown in the table, with the corresponding values for Washington State and the profiled county.

Next Steps: Indicators can be tracked on the county level to inform prevention efforts within WA, and to better understand how social determinants impact county-level health outcomes. Strategic approaches, including increased HIV and HCV testing, should be supported at the county level as needed. Future work will assess additional years of data and changes in indicators and outcomes over time.

	WA State			Skamania		
Indicator	**2016**	**2018**	**Change**	**2016**	**2018**	**Change**
Population & Density						
Population	7,183,700	7,427,570	3.4%	11,500	11,890	3.4%
Population per square mile	108	112	4	7	7	0
Urban-rural classification	N/A			2	2	0
Sociodemographics						
Unemployment rate	6.8%	5.3%	-1.5%	7.7%	4.8%	-2.9%
% With vehicle access	93%	93%	0%	94%	94%	0.4%
% Uninsured	9.8%	6.8%	-3.0%	9.4%	4.6%	-4.8%
% No high school diploma	6.3%	6.0%	-0.3%	6.8%	6.2%	-0.5%
Poverty rate	6.7%	6.2%	-0.5%	8.8%	7.8%	-1.0%
Income per capita	$32,999	$39,119	$6,120	$28,556	$30,217	$1,661
% Non-Hispanic White	70%	68%	-2.0%	88.3%	87.9%	-0.4%
Drug Availability & Outcomes						
In Drug Trafficking Zone	N/A			No		
All drug deaths per 100,000	15	14	-1	9	0	-9
Opioid hospitalizations per 100,000	25	19	-6	9	8	-1
Opioid deaths per 100,000	10	9	-1	0	0	0
Provider Resources						
Mental health providers per 100,000	248	293	45	113	122	9
Specialist providers[1] per 100,000	8	9	1	0	0	0
Transmissible Injection-Related Infections						
HIV cases per 100,000	174	181	7	52	59	7
HCV[2] cases per 100,000	57	59	2	9	67	59

[1] Specialists included doctors board certified in gastroenterology, hepatology, infectious disease, or addiction medicine.

[2] HCV cases included all acute cases and chronic cases in persons born after 1965.

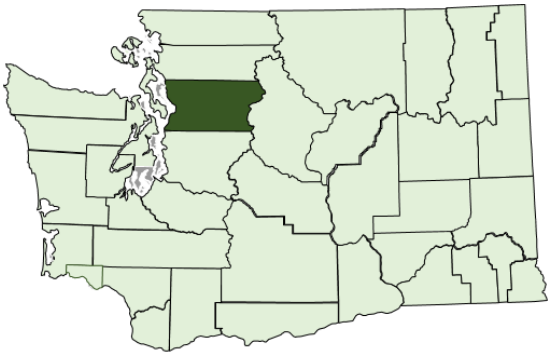
Skamania County has certain vulnerabilities, including a higher rate of unemployment and opioid-related deaths than Washington State.

While the rate of opioid-related deaths declined in Washington from 2016 to 2018, it increased in Skamania County.

***References**: 1. CDC Opioid Overdose: Understanding the Epidemic. 2. NIDA. Washington Opioid Summary. 3. CDC. CDC Estimates Nearly 2.4 Million Americans Living with Hepatitis C. 2018 4. WA DOH. Washington State Communicable Disease Report 2017. 2017. 5. Peters PJ, et al. HIV Infection Linked to Injection Use of Oxymorphone in Indiana, 2014-2015. NEJM 2016. 6.Van Handel MM, et al. County-Level Vulnerability Assessment for Rapid Dissemination of HIV or HCV Infections Among Persons Who Inject Drugs, United States. JAIDS. 2016 7. Mathers BM, et al. Mortality among people who inject drugs: a systematic review and meta-analysis. Bulletin of the WHO. 2013. 8. Rickles M et al. Tennessee's In-state Vulnerability Assessment for a "Rapid Dissemination of Human Immunodeficiency Virus or Hepatitis C Virus Infection" Event Utilizing Data About the Opioid Epidemic. CID. 2018.*

Washington County Profiles of Social Determinants of Health, HIV, Hepatitis C, and Opioid Overdose Among People Who Inject Drugs

SNOHOMISH COUNTY



Background: Opioid use, hepatitis C (HCV), and overdose deaths are increasing in the United States and Washington State.[1-4] There is concern for rapid dissemination of HIV, HCV, and opioid overdose among people who inject drugs (PWID). Following an HIV outbreak among PWID in Scott County, Indiana in 2015,[5] the US Centers for Disease Control and Prevention (CDC) conducted a study to identify indicator variables associated with injection drug use in order to determine which counties may be vulnerable to new or increasing rates of HIV or HCV among PWID.[6] In 2019, Washington performed a similar analysis and added opioid overdose as an outcome since injection drug use is associated with a higher risk of overdose than non-injection use.[7]

Results: Select indicators used in the CDC and Washington State models are shown in the table, with the corresponding values for Washington State and the profiled county.

Next Steps: Indicators can be tracked on the county level to inform prevention efforts within WA, and to better understand how social determinants impact county-level health outcomes. Strategic approaches, including increased HIV and HCV testing, should be supported at the county level as needed. Future work will assess additional years of data and changes in indicators and outcomes over time.

	WA State			Snohomish		
Indicator	**2016**	**2018**	**Change**	**2016**	**2018**	**Change**
Population & Density						
Population	7,183,700	7,427,570	3.4%	772,860	805,120	4.2%
Population per square mile	108	112	4	370	386	15
Urban-rural classification	N/A			2	2	0
Sociodemographics						
Unemployment rate	6.8%	5.3%	-1.5%	6.2%	4.6%	-1.6%
% With vehicle access	93%	93%	0%	95%	95%	0.2%
% Uninsured	9.8%	6.8%	-3.0%	9.0%	6.2%	-2.8%
% No high school diploma	6.3%	6.0%	-0.3%	5.5%	5.2%	-0.3%
Poverty rate	6.7%	6.2%	-0.5%	5.2%	4.7%	-0.5%
Income per capita	$32,999	$39,119	$6,120	$33,883	$37,671	$3,788
% Non-Hispanic White	70%	68%	-2.0%	72.0%	70.3%	-1.7%
Drug Availability & Outcomes						
In Drug Trafficking Zone	N/A			Yes		
All drug deaths per 100,000	15	14	-1	15	20	5
Opioid hospitalizations per 100,000	25	19	-6	30	20	-10
Opioid deaths per 100,000	10	9	-1	90	124	34
Provider Resources						
Mental health providers per 100,000	248	293	45	226	286	60
Specialist providers[1] per 100,000	8	9	1	4	5	1
Transmissible Injection-Related Infections						
HIV cases per 100,000	174	181	7	132	142	10
HCV[2] cases per 100,000	57	59	2	54	56	1

[1] Specialists included doctors board certified in gastroenterology, hepatology, infectious disease, or addiction medicine.

[2] HCV cases included all acute cases and chronic cases in persons born after 1965.

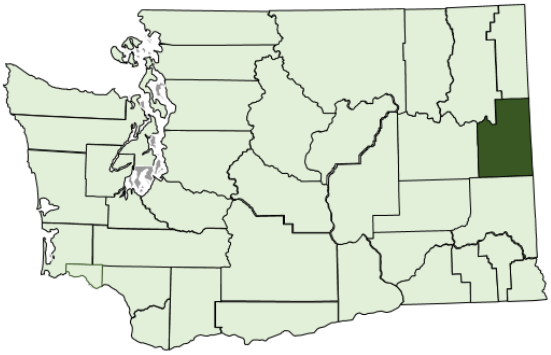
Snohomish County has certain vulnerabilities, including a higher rate of opioid-related hospitalizations and deaths than Washington State.

While the rate of opioid-related deaths declined in Washington from 2016 to 2018, it increased in Snohomish County.

***References**: 1. CDC Opioid Overdose: Understanding the Epidemic. 2. NIDA. Washington Opioid Summary. 3. CDC. CDC Estimates Nearly 2.4 Million Americans Living with Hepatitis C. 2018 4. WA DOH. Washington State Communicable Disease Report 2017. 2017. 5. Peters PJ, et al. HIV Infection Linked to Injection Use of Oxymorphone in Indiana, 2014-2015. NEJM 2016. 6.Van Handel MM, et al. County-Level Vulnerability Assessment for Rapid Dissemination of HIV or HCV Infections Among Persons Who Inject Drugs, United States. JAIDS. 2016 7. Mathers BM, et al. Mortality among people who inject drugs: a systematic review and meta-analysis. Bulletin of the WHO. 2013. 8. Rickles M et al. Tennessee's In-state Vulnerability Assessment for a "Rapid Dissemination of Human Immunodeficiency Virus or Hepatitis C Virus Infection" Event Utilizing Data About the Opioid Epidemic. CID. 2018.*

Washington County Profiles of Social Determinants of Health, HIV, Hepatitis C, and Opioid Overdose Among People Who Inject Drugs

SPOKANE COUNTY



Background: Opioid use, hepatitis C (HCV), and overdose deaths are increasing in the United States and Washington State.[1-4] There is concern for rapid dissemination of HIV, HCV, and opioid overdose among people who inject drugs (PWID). Following an HIV outbreak among PWID in Scott County, Indiana in 2015,[5] the US Centers for Disease Control and Prevention (CDC) conducted a study to identify indicator variables associated with injection drug use in order to determine which counties may be vulnerable to new or increasing rates of HIV or HCV among PWID.[6] In 2019, Washington performed a similar analysis and added opioid overdose as an outcome since injection drug use is associated with a higher risk of overdose than non-injection use.[7]

Results: Select indicators used in the CDC and Washington State models are shown in the table, with the corresponding values for Washington State and the profiled county.

Next Steps: Indicators can be tracked on the county level to inform prevention efforts within WA, and to better understand how social determinants impact county-level health outcomes. Strategic approaches, including increased HIV and HCV testing, should be supported at the county level as needed. Future work will assess additional years of data and changes in indicators and outcomes over time.

	WA State			Spokane		
Indicator	**2016**	**2018**	**Change**	**2016**	**2018**	**Change**
Population & Density						
Population	7,183,700	7,427,570	3.4%	492,530	507,950	3.1%
Population per square mile	108	112	4	279	288	9
Urban-rural classification	N/A			3	3	0
Sociodemographics						
Unemployment rate	6.8%	5.3%	-1.5%	7.2%	5.6%	-1.6%
% With vehicle access	93%	93%	0%	92%	93%	0.3%
% Uninsured	9.8%	6.8%	-3.0%	8.8%	5.4%	-3.3%
% No high school diploma	6.3%	6.0%	-0.3%	4.6%	4.2%	-0.4%
Poverty rate	6.7%	6.2%	-0.5%	7.9%	7.6%	-0.4%
Income per capita	$32,999	$39,119	$6,120	$26,860	$29,982	$3,122
% Non-Hispanic White	70%	68%	-2.0%	85.6%	84.9%	-0.7%
Drug Availability & Outcomes						
In Drug Trafficking Zone	N/A			Yes		
All drug deaths per 100,000	15	14	-1	23	12	-10
Opioid hospitalizations per 100,000	25	19	-6	37	22	-15
Opioid deaths per 100,000	10	9	-1	57	29	-28
Provider Resources						
Mental health providers per 100,000	248	293	45	219	270	51
Specialist providers[1] per 100,000	8	9	1	6	7	1
Transmissible Injection-Related Infections						
HIV cases per 100,000	174	181	7	119	128	10
HCV[2] cases per 100,000	57	59	2	96	109	13

[1] Specialists included doctors board certified in gastroenterology, hepatology, infectious disease, or addiction medicine.

[2] HCV cases included all acute cases and chronic cases in persons born after 1965.

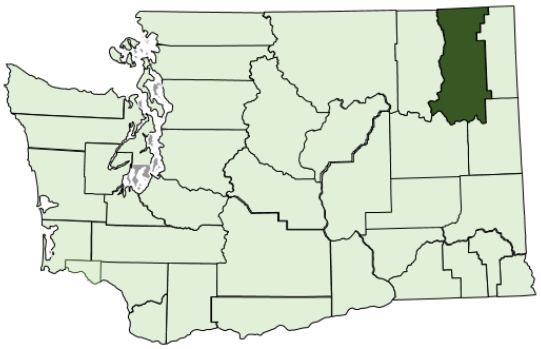
Spokane County has certain vulnerabilities, including a higher rate of opioid-related hospitalizations and deaths than Washington State.

The rate of opioid-related hospitalizations and deaths declined in Washington and Spokane County from 2016 to 2018.

***References**: 1. CDC Opioid Overdose: Understanding the Epidemic. 2. NIDA. Washington Opioid Summary. 3. CDC. CDC Estimates Nearly 2.4 Million Americans Living with Hepatitis C. 2018 4. WA DOH. Washington State Communicable Disease Report 2017. 2017. 5. Peters PJ, et al. HIV Infection Linked to Injection Use of Oxymorphone in Indiana, 2014-2015. NEJM 2016. 6.Van Handel MM, et al. County-Level Vulnerability Assessment for Rapid Dissemination of HIV or HCV Infections Among Persons Who Inject Drugs, United States. JAIDS. 2016 7. Mathers BM, et al. Mortality among people who inject drugs: a systematic review and meta-analysis. Bulletin of the WHO. 2013. 8. Rickles M et al. Tennessee's In-state Vulnerability Assessment for a "Rapid Dissemination of Human Immunodeficiency Virus or Hepatitis C Virus Infection" Event Utilizing Data About the Opioid Epidemic. CID. 2018.*

Washington County Profiles of Social Determinants of Health, HIV, Hepatitis C, and Opioid Overdose Among People Who Inject Drugs

STEVENS COUNTY



Background: Opioid use, hepatitis C (HCV), and overdose deaths are increasing in the United States and Washington State.[1-4] There is concern for rapid dissemination of HIV, HCV, and opioid overdose among people who inject drugs (PWID). Following an HIV outbreak among PWID in Scott County, Indiana in 2015,[5] the US Centers for Disease Control and Prevention (CDC) conducted a study to identify indicator variables associated with injection drug use in order to determine which counties may be vulnerable to new or increasing rates of HIV or HCV among PWID.[6] In 2019, Washington performed a similar analysis and added opioid overdose as an outcome since injection drug use is associated with a higher risk of overdose than non-injection use.[7]

Results: Select indicators used in the CDC and Washington State models are shown in the table, with the corresponding values for Washington State and the profiled county.

Next Steps: Indicators can be tracked on the county level to inform prevention efforts within WA, and to better understand how social determinants impact county-level health outcomes. Strategic approaches, including increased HIV and HCV testing, should be supported at the county level as needed. Future work will assess additional years of data and changes in indicators and outcomes over time.

	WA State			Stevens		
Indicator	**2016**	**2018**	**Change**	**2016**	**2018**	**Change**
Population & Density						
Population	7,183,700	7,427,570	3.4%	44,100	45,030	2.1%
Population per square mile	108	112	4	18	18	0
Urban-rural classification	N/A			3	3	0
Sociodemographics						
Unemployment rate	6.8%	5.3%	-1.5%	8.9%	6.7%	-2.2%
% With vehicle access	93%	93%	0%	96%	96%	-0.1%
% Uninsured	9.8%	6.8%	-3.0%	10.2%	7.4%	-2.8%
% No high school diploma	6.3%	6.0%	-0.3%	7.1%	6.6%	-0.5%
Poverty rate	6.7%	6.2%	-0.5%	9.8%	9.6%	-0.3%
Income per capita	$32,999	$39,119	$6,120	$22,745	$25,197	$2,452
% Non-Hispanic White	70%	68%	-2.0%	87.1%	86.7%	-0.4%
Drug Availability & Outcomes						
In Drug Trafficking Zone	N/A			No		
All drug deaths per 100,000	15	14	-1	23	9	-14
Opioid hospitalizations per 100,000	25	19	-6	32	18	-14
Opioid deaths per 100,000	10	9	-1	6	2	-4
Provider Resources						
Mental health providers per 100,000	248	293	45	234	277	43
Specialist providers[1] per 100,000	8	9	1	2	0	-2
Transmissible Injection-Related Infections						
HIV cases per 100,000	174	181	7	50	60	10
HCV[2] cases per 100,000	57	59	2	43	64	21

[1] Specialists included doctors board certified in gastroenterology, hepatology, infectious disease, or addiction medicine.

[2] HCV cases included all acute cases and chronic cases in persons born after 1965.

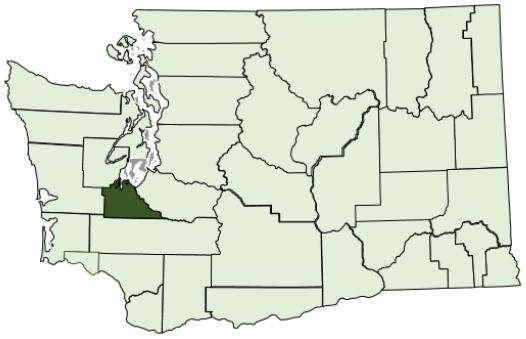
Stevens County has certain vulnerabilities, including a higher rate of unemployment and HCV infections than Washington State.

The rate of opioid-related hospitalizations and deaths declined in Washington and Stevens County from 2016 to 2018.

References: *1. CDC Opioid Overdose: Understanding the Epidemic. 2. NIDA. Washington Opioid Summary. 3. CDC. CDC Estimates Nearly 2.4 Million Americans Living with Hepatitis C. 2018 4. WA DOH. Washington State Communicable Disease Report 2017. 2017. 5. Peters PJ, et al. HIV Infection Linked to Injection Use of Oxymorphone in Indiana, 2014-2015. NEJM 2016. 6.Van Handel MM, et al. County-Level Vulnerability Assessment for Rapid Dissemination of HIV or HCV Infections Among Persons Who Inject Drugs, United States. JAIDS. 2016 7. Mathers BM, et al. Mortality among people who inject drugs: a systematic review and meta-analysis. Bulletin of the WHO. 2013. 8. Rickles M et al. Tennessee's In-state Vulnerability Assessment for a "Rapid Dissemination of Human Immunodeficiency Virus or Hepatitis C Virus Infection" Event Utilizing Data About the Opioid Epidemic. CID. 2018.*

Washington County Profiles of Social Determinants of Health, HIV, Hepatitis C, and Opioid Overdose Among People Who Inject Drugs

THURSTON COUNTY



Background: Opioid use, hepatitis C (HCV), and overdose deaths are increasing in the United States and Washington State.[1-4] There is concern for rapid dissemination of HIV, HCV, and opioid overdose among people who inject drugs (PWID). Following an HIV outbreak among PWID in Scott County, Indiana in 2015,[5] the US Centers for Disease Control and Prevention (CDC) conducted a study to identify indicator variables associated with injection drug use in order to determine which counties may be vulnerable to new or increasing rates of HIV or HCV among PWID.[6] In 2019, Washington performed a similar analysis and added opioid overdose as an outcome since injection drug use is associated with a higher risk of overdose than non-injection use.[7]

Results: Select indicators used in the CDC and Washington State models are shown in the table, with the corresponding values for Washington State and the profiled county.

Next Steps: Indicators can be tracked on the county level to inform prevention efforts within WA, and to better understand how social determinants impact county-level health outcomes. Strategic approaches, including increased HIV and HCV testing, should be supported at the county level as needed. Future work will assess additional years of data and changes in indicators and outcomes over time.

	WA State			Thurston		
Indicator	**2016**	**2018**	**Change**	**2016**	**2018**	**Change**
Population & Density						
Population	7,183,700	7,427,570	3.4%	272,690	281,700	3.3%
Population per square mile	108	112	4	378	390	12
Urban-rural classification	N/A			3	3	0
Sociodemographics						
Unemployment rate	6.8%	5.3%	-1.5%	8.4%	6.9%	-1.5%
% With vehicle access	93%	93%	0%	95%	95%	0.4%
% Uninsured	9.8%	6.8%	-3.0%	8.3%	5.3%	-3.0%
% No high school diploma	6.3%	6.0%	-0.3%	4.3%	4.1%	-0.3%
Poverty rate	6.7%	6.2%	-0.5%	6.7%	6.3%	-0.4%
Income per capita	$32,999	$39,119	$6,120	$30,583	$33,901	$3,318
% Non-Hispanic White	70%	68%	-2.0%	76.4%	75.4%	-1.0%
Drug Availability & Outcomes						
In Drug Trafficking Zone	N/A			Yes		
All drug deaths per 100,000	15	14	-1	10	10	0
Opioid hospitalizations per 100,000	25	19	-6	22	19	-3
Opioid deaths per 100,000	10	9	-1	14	20	6
Provider Resources						
Mental health providers per 100,000	248	293	45	176	231	55
Specialist providers[1] per 100,000	8	9	1	8	9	0
Transmissible Injection-Related Infections						
HIV cases per 100,000	174	181	7	100	113	12
HCV[2] cases per 100,000	57	59	2	52	47	-4

[1] Specialists included doctors board certified in gastroenterology, hepatology, infectious disease, or addiction medicine.

[2] HCV cases included all acute cases and chronic cases in persons born after 1965.

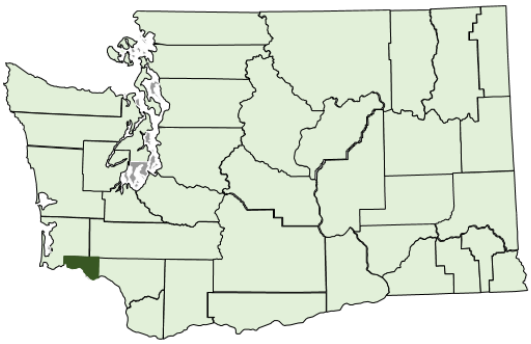
Thurston County has certain vulnerabilities, including a higher rate of unemployment and opioid-related hospitalizations than Washington State.

The rate of opioid-related hospitalizations declined in Washington and Thurston County from 2016 to 2018.

References: *1. CDC Opioid Overdose: Understanding the Epidemic. 2. NIDA. Washington Opioid Summary. 3. CDC. CDC Estimates Nearly 2.4 Million Americans Living with Hepatitis C. 2018 4. WA DOH. Washington State Communicable Disease Report 2017. 2017. 5. Peters PJ, et al. HIV Infection Linked to Injection Use of Oxymorphone in Indiana, 2014-2015. NEJM 2016. 6.Van Handel MM, et al. County-Level Vulnerability Assessment for Rapid Dissemination of HIV or HCV Infections Among Persons Who Inject Drugs, United States. JAIDS. 2016 7. Mathers BM, et al. Mortality among people who inject drugs: a systematic review and meta-analysis. Bulletin of the WHO. 2013. 8. Rickles M et al. Tennessee's In-state Vulnerability Assessment for a "Rapid Dissemination of Human Immunodeficiency Virus or Hepatitis C Virus Infection" Event Utilizing Data About the Opioid Epidemic. CID. 2018.*

Washington County Profiles of Social Determinants of Health, HIV, Hepatitis C, and Opioid Overdose Among People Who Inject Drugs

WAHKIAKUM COUNTY



Background: Opioid use, hepatitis C (HCV), and overdose deaths are increasing in the United States and Washington State.[1-4] There is concern for rapid dissemination of HIV, HCV, and opioid overdose among people who inject drugs (PWID). Following an HIV outbreak among PWID in Scott County, Indiana in 2015,[5] the US Centers for Disease Control and Prevention (CDC) conducted a study to identify indicator variables associated with injection drug use in order to determine which counties may be vulnerable to new or increasing rates of HIV or HCV among PWID.[6] In 2019, Washington performed a similar analysis and added opioid overdose as an outcome since injection drug use is associated with a higher risk of overdose than non-injection use.[7]

Results: Select indicators used in the CDC and Washington State models are shown in the table, with the corresponding values for Washington State and the profiled county.

Next Steps: Indicators can be tracked on the county level to inform prevention efforts within WA, and to better understand how social determinants impact county-level health outcomes. Strategic approaches, including increased HIV and HCV testing, should be supported at the county level as needed. Future work will assess additional years of data and changes in indicators and outcomes over time.

	WA State			Wahkiakum		
Indicator	**2016**	**2018**	**Change**	**2016**	**2018**	**Change**
Population & Density						
Population	7,183,700	7,427,570	3.4%	4,000	4,100	2.5%
Population per square mile	108	112	4	15	16	0
Urban-rural classification	N/A			6	6	0
Sociodemographics						
Unemployment rate	6.8%	5.3%	-1.5%	7.0%	5.3%	-1.7%
% With vehicle access	93%	93%	0%	96%	99%	2.7%
% Uninsured	9.8%	6.8%	-3.0%	8.3%	7.2%	-1.1%
% No high school diploma	6.3%	6.0%	-0.3%	5.3%	6.9%	1.6%
Poverty rate	6.7%	6.2%	-0.5%	10.2%	5.8%	-4.4%
Income per capita	$32,999	$39,119	$6,120	$27,619	$29,452	$1,833
% Non-Hispanic White	70%	68%	-2.0%	89.7%	87.2%	-2.5%
Drug Availability & Outcomes						
In Drug Trafficking Zone	N/A			No		
All drug deaths per 100,000	15	14	-1	0	49	49
Opioid hospitalizations per 100,000	25	19	-6	0	0	0
Opioid deaths per 100,000	10	9	-1	0	1	1
Provider Resources						
Mental health providers per 100,000	248	293	45	300	266	-34
Specialist providers[1] per 100,000	8	9	1	0	0	0
Transmissible Injection-Related Infections						
HIV cases per 100,000	174	181	7	100	98	-2
HCV[2] cases per 100,000	57	59	2	0	49	49

[1] Specialists included doctors board certified in gastroenterology, hepatology, infectious disease, or addiction medicine.

[2] HCV cases included all acute cases and chronic cases in persons born after 1965.

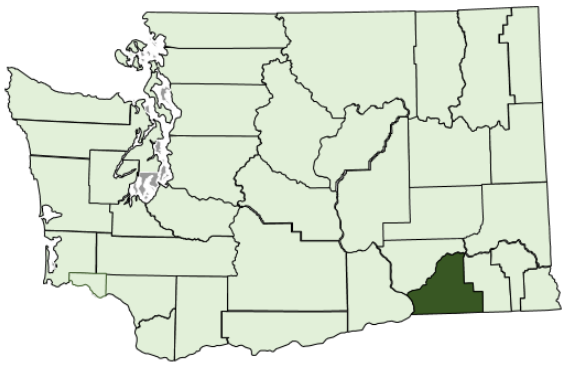
Wahkiakum County has certain vulnerabilities, including a higher rate of drug deaths than Washington State.

While drug deaths declined in Washington State from 2016 to 2018, they increased in Wahkiakum County.

References: *1. CDC Opioid Overdose: Understanding the Epidemic. 2. NIDA. Washington Opioid Summary. 3. CDC. CDC Estimates Nearly 2.4 Million Americans Living with Hepatitis C. 2018 4. WA DOH. Washington State Communicable Disease Report 2017. 2017. 5. Peters PJ, et al. HIV Infection Linked to Injection Use of Oxymorphone in Indiana, 2014-2015. NEJM 2016. 6.Van Handel MM, et al. County-Level Vulnerability Assessment for Rapid Dissemination of HIV or HCV Infections Among Persons Who Inject Drugs, United States. JAIDS. 2016 7. Mathers BM, et al. Mortality among people who inject drugs: a systematic review and meta-analysis. Bulletin of the WHO. 2013. 8. Rickles M et al. Tennessee's In-state Vulnerability Assessment for a "Rapid Dissemination of Human Immunodeficiency Virus or Hepatitis C Virus Infection" Event Utilizing Data About the Opioid Epidemic. CID. 2018.*

Washington County Profiles of Social Determinants of Health, HIV, Hepatitis C, and Opioid Overdose Among People Who Inject Drugs

WALLA WALLA COUNTY



Background: Opioid use, hepatitis C (HCV), and overdose deaths are increasing in the United States and Washington State.[1-4] There is concern for rapid dissemination of HIV, HCV, and opioid overdose among people who inject drugs (PWID). Following an HIV outbreak among PWID in Scott County, Indiana in 2015,[5] the US Centers for Disease Control and Prevention (CDC) conducted a study to identify indicator variables associated with injection drug use in order to determine which counties may be vulnerable to new or increasing rates of HIV or HCV among PWID.[6] In 2019, Washington performed a similar analysis and added opioid overdose as an outcome since injection drug use is associated with a higher risk of overdose than non-injection use.[7]

Results: Select indicators used in the CDC and Washington State models are shown in the table, with the corresponding values for Washington State and the profiled county.

Next Steps: Indicators can be tracked on the county level to inform prevention efforts within WA, and to better understand how social determinants impact county-level health outcomes. Strategic approaches, including increased HIV and HCV testing, should be supported at the county level as needed. Future work will assess additional years of data and changes in indicators and outcomes over time.

	WA State			Walla Walla		
Indicator	**2016**	**2018**	**Change**	**2016**	**2018**	**Change**
Population & Density						
Population	7,183,700	7,427,570	3.4%	60,730	61,800	1.8%
Population per square mile	108	112	4	48	49	1
Urban-rural classification	N/A			4	4	0
Sociodemographics						
Unemployment rate	6.8%	5.3%	-1.5%	6.4%	5.2%	-1.2%
% With vehicle access	93%	93%	0%	92%	93%	0.9%
% Uninsured	9.8%	6.8%	-3.0%	10.1%	7.4%	-2.7%
% No high school diploma	6.3%	6.0%	-0.3%	7.3%	7.8%	0.5%
Poverty rate	6.7%	6.2%	-0.5%	6.9%	6.0%	-0.9%
Income per capita	$32,999	$39,119	$6,120	$24,736	$27,835	$3,099
% Non-Hispanic White	70%	68%	-2.0%	72.6%	71.9%	-0.7%
Drug Availability & Outcomes						
In Drug Trafficking Zone	N/A			No		
All drug deaths per 100,000	15	14	-1	15	18	3
Opioid hospitalizations per 100,000	25	19	-6	25	18	-7
Opioid deaths per 100,000	10	9	-1	5	5	0
Provider Resources						
Mental health providers per 100,000	248	293	45	214	225	11
Specialist providers[1] per 100,000	8	9	1	3	6	3
Transmissible Injection-Related Infections						
HIV cases per 100,000	174	181	7	84	89	5
HCV[2] cases per 100,000	57	59	2	16	87	71

[1] Specialists included doctors board certified in gastroenterology, hepatology, infectious disease, or addiction medicine.

[2] HCV cases included all acute cases and chronic cases in persons born after 1965.

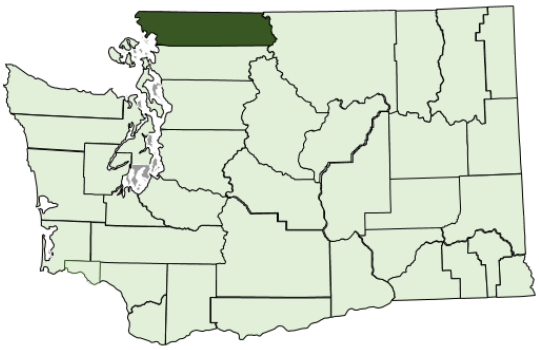
Walla Walla County has certain vulnerabilities, including a higher rate of drug deaths and HCV infections than Washington State.

While drug deaths declined in Washington State from 2016 to 2018, they increased in Walla Walla County.

***References**: 1. CDC Opioid Overdose: Understanding the Epidemic. 2. NIDA. Washington Opioid Summary. 3. CDC. CDC Estimates Nearly 2.4 Million Americans Living with Hepatitis C. 2018 4. WA DOH. Washington State Communicable Disease Report 2017. 2017. 5. Peters PJ, et al. HIV Infection Linked to Injection Use of Oxymorphone in Indiana, 2014-2015. NEJM 2016. 6.Van Handel MM, et al. County-Level Vulnerability Assessment for Rapid Dissemination of HIV or HCV Infections Among Persons Who Inject Drugs, United States. JAIDS. 2016 7. Mathers BM, et al. Mortality among people who inject drugs: a systematic review and meta-analysis. Bulletin of the WHO. 2013. 8. Rickles M et al. Tennessee's In-state Vulnerability Assessment for a "Rapid Dissemination of Human Immunodeficiency Virus or Hepatitis C Virus Infection" Event Utilizing Data About the Opioid Epidemic. CID. 2018.*

Washington County Profiles of Social Determinants of Health, HIV, Hepatitis C, and Opioid Overdose Among People Who Inject Drugs

WHATCOM COUNTY



Background: Opioid use, hepatitis C (HCV), and overdose deaths are increasing in the United States and Washington State.[1-4] There is concern for rapid dissemination of HIV, HCV, and opioid overdose among people who inject drugs (PWID). Following an HIV outbreak among PWID in Scott County, Indiana in 2015,[5] the US Centers for Disease Control and Prevention (CDC) conducted a study to identify indicator variables associated with injection drug use in order to determine which counties may be vulnerable to new or increasing rates of HIV or HCV among PWID.[6] In 2019, Washington performed a similar analysis and added opioid overdose as an outcome since injection drug use is associated with a higher risk of overdose than non-injection use.[7]

Results: Select indicators used in the CDC and Washington State models are shown in the table, with the corresponding values for Washington State and the profiled county.

Next Steps: Indicators can be tracked on the county level to inform prevention efforts within WA, and to better understand how social determinants impact county-level health outcomes. Strategic approaches, including increased HIV and HCV testing, should be supported at the county level as needed. Future work will assess additional years of data and changes in indicators and outcomes over time.

	WA State			Whatcom		
Indicator	**2016**	**2018**	**Change**	**2016**	**2018**	**Change**
Population & Density						
Population	7,183,700	7,427,570	3.4%	212,540	220,350	3.7%
Population per square mile	108	112	4	101	105	4
Urban-rural classification	N/A			4	4	0
Sociodemographics						
Unemployment rate	6.8%	5.3%	-1.5%	7.7%	6.3%	-1.4%
% With vehicle access	93%	93%	0%	93%	93%	0.2%
% Uninsured	9.8%	6.8%	-3.0%	9.7%	6.3%	-3.3%
% No high school diploma	6.3%	6.0%	-0.3%	5.6%	5.0%	-0.6%
Poverty rate	6.7%	6.2%	-0.5%	7.6%	6.9%	-0.6%
Income per capita	$32,999	$39,119	$6,120	$27,810	$30,586	$2,776
% Non-Hispanic White	70%	68%	-2.0%	80.1%	79.3%	-0.8%
Drug Availability & Outcomes						
In Drug Trafficking Zone	N/A			Yes		
All drug deaths per 100,000	15	14	-1	6	3	-3
Opioid hospitalizations per 100,000	25	19	-6	20	10	-10
Opioid deaths per 100,000	10	9	-1	11	4	-7
Provider Resources						
Mental health providers per 100,000	248	293	45	351	404	54
Specialist providers[1] per 100,000	8	9	1	8	8	0
Transmissible Injection-Related Infections						
HIV cases per 100,000	174	181	7	83	107	24
HCV[2] cases per 100,000	57	59	2	79	65	-14

[1] Specialists included doctors board certified in gastroenterology, hepatology, infectious disease, or addiction medicine.

[2] HCV cases included all acute cases and chronic cases in persons born after 1965.

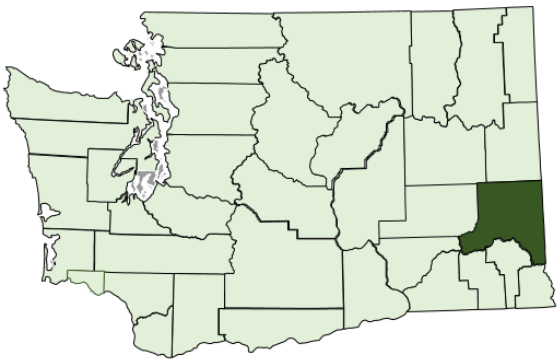
Whatcom County has certain vulnerabilities, including a higher rate of opioid-related hospitalizations and HCV infections than Washington State.

Drug deaths declined in Washington State and Whatcom County from 2016 to 2018.

***References**: 1. CDC Opioid Overdose: Understanding the Epidemic. 2. NIDA. Washington Opioid Summary. 3. CDC. CDC Estimates Nearly 2.4 Million Americans Living with Hepatitis C. 2018 4. WA DOH. Washington State Communicable Disease Report 2017. 2017. 5. Peters PJ, et al. HIV Infection Linked to Injection Use of Oxymorphone in Indiana, 2014-2015. NEJM 2016. 6.Van Handel MM, et al. County-Level Vulnerability Assessment for Rapid Dissemination of HIV or HCV Infections Among Persons Who Inject Drugs, United States. JAIDS. 2016 7. Mathers BM, et al. Mortality among people who inject drugs: a systematic review and meta-analysis. Bulletin of the WHO. 2013. 8. Rickles M et al. Tennessee's In-state Vulnerability Assessment for a "Rapid Dissemination of Human Immunodeficiency Virus or Hepatitis C Virus Infection" Event Utilizing Data About the Opioid Epidemic. CID. 2018.*

Washington County Profiles of Social Determinants of Health, HIV, Hepatitis C, and Opioid Overdose Among People Who Inject Drugs

WHITMAN COUNTY



Background: Opioid use, hepatitis C (HCV), and overdose deaths are increasing in the United States and Washington State.[1-4] There is concern for rapid dissemination of HIV, HCV, and opioid overdose among people who inject drugs (PWID). Following an HIV outbreak among PWID in Scott County, Indiana in 2015,[5] the US Centers for Disease Control and Prevention (CDC) conducted a study to identify indicator variables associated with injection drug use in order to determine which counties may be vulnerable to new or increasing rates of HIV or HCV among PWID.[6] In 2019, Washington performed a similar analysis and added opioid overdose as an outcome since injection drug use is associated with a higher risk of overdose than non-injection use.[7]

Results: Select indicators used in the CDC and Washington State models are shown in the table, with the corresponding values for Washington State and the profiled county.

Next Steps: Indicators can be tracked on the county level to inform prevention efforts within WA, and to better understand how social determinants impact county-level health outcomes. Strategic approaches, including increased HIV and HCV testing, should be supported at the county level as needed. Future work will assess additional years of data and changes in indicators and outcomes over time.

	WA State			Whitman		
Indicator	**2016**	**2018**	**Change**	**2016**	**2018**	**Change**
Population & Density						
Population	7,183,700	7,427,570	3.4%	47,940	49,210	2.6%
Population per square mile	108	112	4	22	23	1
Urban-rural classification	N/A			5	5	0
Sociodemographics						
Unemployment rate	6.8%	5.3%	-1.5%	8.9%	9.0%	0.1%
% With vehicle access	93%	93%	0%	92%	92%	-0.4%
% Uninsured	9.8%	6.8%	-3.0%	7.2%	4.3%	-3.0%
% No high school diploma	6.3%	6.0%	-0.3%	2.0%	2.3%	0.3%
Poverty rate	6.7%	6.2%	-0.5%	6.6%	6.1%	-0.6%
Income per capita	$32,999	$39,119	$6,120	$20,957	$22,585	$1,628
% Non-Hispanic White	70%	68%	-2.0%	79.8%	78.9%	-0.9%
Drug Availability & Outcomes						
In Drug Trafficking Zone	N/A			No		
All drug deaths per 100,000	15	14	-1	8	6	-2
Opioid hospitalizations per 100,000	25	19	-6	10	4	-6
Opioid deaths per 100,000	10	9	-1	2	2	0
Provider Resources						
Mental health providers per 100,000	248	293	45	134	145	12
Specialist providers[1] per 100,000	8	9	1	0	2	2
Transmissible Injection-Related Infections						
HIV cases per 100,000	174	181	7	44	49	5
HCV[2] cases per 100,000	57	59	2	0	28	28

[1] Specialists included doctors board certified in gastroenterology, hepatology, infectious disease, or addiction medicine.

[2] HCV cases included all acute cases and chronic cases in persons born after 1965.

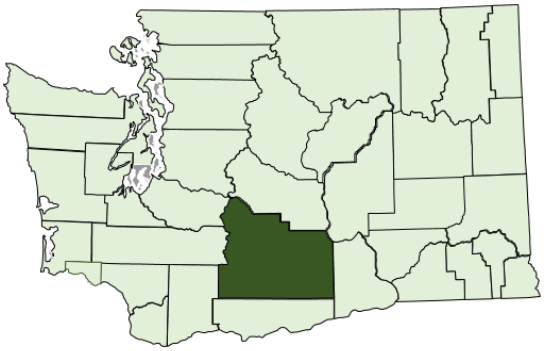
Whitman County has certain vulnerabilities, including a higher rate unemployment than Washington State.

Drug deaths declined in Washington State and Whitman County from 2016 to 2018.

References: *1. CDC Opioid Overdose: Understanding the Epidemic. 2. NIDA. Washington Opioid Summary. 3. CDC. CDC Estimates Nearly 2.4 Million Americans Living with Hepatitis C. 2018 4. WA DOH. Washington State Communicable Disease Report 2017. 2017. 5. Peters PJ, et al. HIV Infection Linked to Injection Use of Oxymorphone in Indiana, 2014-2015. NEJM 2016. 6.Van Handel MM, et al. County-Level Vulnerability Assessment for Rapid Dissemination of HIV or HCV Infections Among Persons Who Inject Drugs, United States. JAIDS. 2016 7. Mathers BM, et al. Mortality among people who inject drugs: a systematic review and meta-analysis. Bulletin of the WHO. 2013. 8. Rickles M et al. Tennessee's In-state Vulnerability Assessment for a "Rapid Dissemination of Human Immunodeficiency Virus or Hepatitis C Virus Infection" Event Utilizing Data About the Opioid Epidemic. CID. 2018.*

Washington County Profiles of Social Determinants of Health, HIV, Hepatitis C, and Opioid Overdose Among People Who Inject Drugs

YAKIMA COUNTY



Background: Opioid use, hepatitis C (HCV), and overdose deaths are increasing in the United States and Washington State.[1-4] There is concern for rapid dissemination of HIV, HCV, and opioid overdose among people who inject drugs (PWID). Following an HIV outbreak among PWID in Scott County, Indiana in 2015,[5] the US Centers for Disease Control and Prevention (CDC) conducted a study to identify indicator variables associated with injection drug use in order to determine which counties may be vulnerable to new or increasing rates of HIV or HCV among PWID.[6] In 2019, Washington performed a similar analysis and added opioid overdose as an outcome since injection drug use is associated with a higher risk of overdose than non-injection use.[7]

Results: Select indicators used in the CDC and Washington State models are shown in the table, with the corresponding values for Washington State and the profiled county.

Next Steps: Indicators can be tracked on the county level to inform prevention efforts within WA, and to better understand how social determinants impact county-level health outcomes. Strategic approaches, including increased HIV and HCV testing, should be supported at the county level as needed. Future work will assess additional years of data and changes in indicators and outcomes over time.

	WA State			Yakima		
Indicator	**2016**	**2018**	**Change**	**2016**	**2018**	**Change**
Population & Density						
Population	7,183,700	7,427,570	3.4%	250,900	254,500	1.4%
Population per square mile	108	112	4	58	59	1
Urban-rural classification	N/A			4	4	0
Sociodemographics						
Unemployment rate	6.8%	5.3%	-1.5%	8.3%	6.6%	-1.7%
% With vehicle access	93%	93%	0%	95%	95%	0.0%
% Uninsured	9.8%	6.8%	-3.0%	17.9%	13.1%	-4.8%
% No high school diploma	6.3%	6.0%	-0.3%	16.3%	15.9%	-0.4%
Poverty rate	6.7%	6.2%	-0.5%	8.9%	8.0%	-0.9%
Income per capita	$32,999	$39,119	$6,120	$20,653	$22,459	$1,806
% Non-Hispanic White	70%	68%	-2.0%	45.0%	43.7%	-1.3%
Drug Availability & Outcomes						
In Drug Trafficking Zone	N/A			Yes		
All drug deaths per 100,000	15	14	-1	10	15	5
Opioid hospitalizations per 100,000	25	19	-6	27	31	4
Opioid deaths per 100,000	10	9	-1	15	26	11
Provider Resources						
Mental health providers per 100,000	248	293	45	217	251	34
Specialist providers[1] per 100,000	8	9	1	6	7	1
Transmissible Injection-Related Infections						
HIV cases per 100,000	174	181	7	92	95	3
HCV[2] cases per 100,000	57	59	2	36	41	5

[1] Specialists included doctors board certified in gastroenterology, hepatology, infectious disease, or addiction medicine.

[2] HCV cases included all acute cases and chronic cases in persons born after 1965.

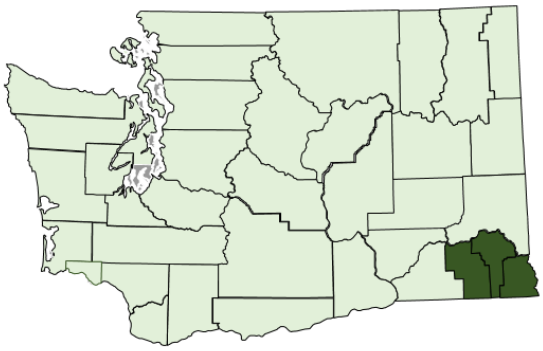
Yakima County has certain vulnerabilities, including a higher rate of unemployment and opioid-related hospitalizations and deaths than Washington State.

While drug deaths and opioid-related hospitalizations declined in Washington State from 2016 to 2018, they increased in Yakima County.

***References**: 1. CDC Opioid Overdose: Understanding the Epidemic. 2. NIDA. Washington Opioid Summary. 3. CDC. CDC Estimates Nearly 2.4 Million Americans Living with Hepatitis C. 2018 4. WA DOH. Washington State Communicable Disease Report 2017. 2017. 5. Peters PJ, et al. HIV Infection Linked to Injection Use of Oxymorphone in Indiana, 2014-2015. NEJM 2016. 6.Van Handel MM, et al. County-Level Vulnerability Assessment for Rapid Dissemination of HIV or HCV Infections Among Persons Who Inject Drugs, United States. JAIDS. 2016 7. Mathers BM, et al. Mortality among people who inject drugs: a systematic review and meta-analysis. Bulletin of the WHO. 2013. 8. Rickles M et al. Tennessee's In-state Vulnerability Assessment for a "Rapid Dissemination of Human Immunodeficiency Virus or Hepatitis C Virus Infection" Event Utilizing Data About the Opioid Epidemic. CID. 2018.*

Washington County Profiles of Social Determinants of Health, HIV, Hepatitis C, and Opioid Overdose Among People Who Inject Drugs

GARFIELD, ASOTIN, & COLUMBIA COUNTY



Background: Opioid use, hepatitis C (HCV), and overdose deaths are increasing in the United States and Washington State.[1-4] There is concern for rapid dissemination of HIV, HCV, and opioid overdose among people who inject drugs (PWID). Following an HIV outbreak among PWID in Scott County, Indiana in 2015,[5] the US Centers for Disease Control and Prevention (CDC) conducted a study to identify indicator variables associated with injection drug use in order to determine which counties may be vulnerable to new or increasing rates of HIV or HCV among PWID.[6] In 2019, Washington performed a similar analysis and added opioid overdose as an outcome since injection drug use is associated with a higher risk of overdose than non-injection use.[7]

Results: Select indicators used in the CDC and Washington State models are shown in the table, with the corresponding values for Washington State and the profiled county.

Next Steps: Indicators can be tracked on the county level to inform prevention efforts within WA, and to better understand how social determinants impact county-level health outcomes. Strategic approaches, including increased HIV and HCV testing, should be supported at the county level as needed. Future work will assess additional years of data and changes in indicators and outcomes over time.

	WA State			Garfield/Asotin/Columbia		
Indicator	**2016**	**2018**	**Change**	**2016**	**2018**	**Change**
Population & Density						
Population	7,183,700	7,427,570	3.4%	28,400	28,780	1.3%
Population per square mile	108	112	4	13	13	0
Urban-rural classification	N/A			5	5	0
Sociodemographics						
Unemployment rate	6.8%	5.3%	-1.5%	8.1%	6.6%	-1.5%
% With vehicle access	93%	93%	0%	94%	95%	1.5%
% Uninsured	9.8%	6.8%	-3.0%	9.4%	171.8%	162.3%
% No high school diploma	6.3%	6.0%	-0.3%	6.8%	6.7%	-0.2%
Poverty rate	6.7%	6.2%	-0.5%	7.9%	7.3%	-0.7%
Income per capita	$32,999	$39,119	$6,120	$25,681	$28,076	$2,395
% Non-Hispanic White	70%	68%	-2.0%	91.0%	90.1%	-0.9%
Drug Availability & Outcomes						
In Drug Trafficking Zone	N/A			No		
All drug deaths per 100,000	15	14	-1	32	7	-25
Opioid hospitalizations per 100,000	25	19	-6	35	24	-11
Opioid deaths per 100,000	10	9	-1	4	0	-4
Provider Resources						
Mental health providers per 100,000	248	293	45	194	0	-194
Specialist providers[1] per 100,000	8	9	1	11	14	3
Transmissible Injection-Related Infections						
HIV cases per 100,000	174	181	7	109	97	-12
HCV[2] cases per 100,000	57	59	2	4	69	66

[1] Specialists included doctors board certified in gastroenterology, hepatology, infectious disease, or addiction medicine.

[2] HCV cases included all acute cases and chronic cases in persons born after 1965.

Garfield, Asotin, and Columbia counties have certain vulnerabilities, including a higher rate of unemployment and HCV infections than Washington State.

Drug deaths declined in Washington State and Garfield, Asotin, and Columbia counties from 2016 to 2018.

***References**: 1. CDC Opioid Overdose: Understanding the Epidemic. 2. NIDA. Washington Opioid Summary. 3. CDC. CDC Estimates Nearly 2.4 Million Americans Living with Hepatitis C. 2018 4. WA DOH. Washington State Communicable Disease Report 2017. 2017. 5. Peters PJ, et al. HIV Infection Linked to Injection Use of Oxymorphone in Indiana, 2014-2015. NEJM 2016. 6.Van Handel MM, et al. County-Level Vulnerability Assessment for Rapid Dissemination of HIV or HCV Infections Among Persons Who Inject Drugs, United States. JAIDS. 2016 7. Mathers BM, et al. Mortality among people who inject drugs: a systematic review and meta-analysis. Bulletin of the WHO. 2013. 8. Rickles M et al. Tennessee's In-state Vulnerability Assessment for a "Rapid Dissemination of Human Immunodeficiency Virus or Hepatitis C Virus Infection" Event Utilizing Data About the Opioid Epidemic. CID. 2018.*