Hepatitis B Virus and Hepatitis C Virus Annual Report 2017

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Hepatitis B virus and hepatitis C virus data and other reportable communicable disease data for Utah are published by the UDOH, Bureau of Epidemiology.

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Viral Hepatitis

Background

Hepatitis means an inflammation of the liver. Hepatitits B virus (HBV) and hepatitis C virus (HCV) are two of the most common causes of hepatitis. HBV is spread through blood, semen, or other body fluids; HCV is spread through blood only. Illness may last a few weeks (acute) or become a lifelong illness (chronic). Acute infection can range in severity from a very mild illness with few or no symptoms to a serious condition requiring hospitalization, while chronic infection can cause serious health problems, including liver disease, liver failure, liver cancer and even death. Symptoms may include fever, tiredness, loss of appetite, nausea, vomiting, dark urine, grey-colored stool, joint pain, and yellow skin and eyes.

Hepatits B Virus

During 2011–2012, there were nearly 847,000 non-institutionalized persons in the U. S. with chronic HBV infection. Chronic HBV infection is an even greater problem globally, with approximately 257 million persons living with the disease and an estimated 887,000 annual HBV-related deaths.[1] Chronic HBV infection is not thought to be a major source of recent HBV infections.[2] Nationally, between 1990–2014, the rate of acute HBV infections declined, particularly among children born since 1991, when routine vaccination of children was first recommended.[2] Since 2014, there have been reports of increasing rates of acute HBV, likely due to increasing injection drug use (IDU).[2]

A total of 19 acute HBV cases were reported in Utah in 2017. Of the 11 (57.9%) cases for whom risk factor information was available, 81.8% (n=9) of these cases had a history of IDU. None reported being born to a HBV positive mother or having sexual contact with a HBV positive individual. Of the cases with a history of IDU, 44.4% (n=4) were co-infected with HCV and 66.7% (n=6) were between the ages of 25–44 years.

Hepatitis C Virus

Nationally, chronic HCV infection is most common in people born between 1945–1965 due to behavioral risks and a lack of HCV screening for blood donors before 1992. This population is at greatest immediate risk of disease progression due to their long-term infection. However, these individuals are not thought to be a major source of recent HCV transmission to others[2]. Acute HCV infections are increasing most rapidly among young people 20–29 years of age.[1] This is likely the result of an increase in IDU associated with the opioid epidemic[1]. Persons who inject drugs (PWIDs) are believed to be responsible for the majority of HCV transmission in Utah, and are, therefore, a priority population for public health intervention.

A total of 109 acute HCV cases were reported in Utah in 2017. Utah public health attempts to contact all acute viral hepatitis cases to collect surveillance data, provide education, provide referral to resources and treatment, and attempt to identify the source of infection. In 2017, risk factor information was obtained for 60% (n= 65) of acute HCV case-patients. The 2017 risk factor data indicated that 69.0% (n=45) of cases had a history of IDU at some point in their lifetime of whom 54% (n=35) reported current IDU. Of the cases found to have a history of IDU, 80% (n=36) were between the ages of 25–44 years.

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[1] CDC National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention, Hepatitis *b questions and answers for health professionals*, (Atlanta, GA, CDC, 2018), https://www.cdc.gov/hepatitis/hbv/hbvfaq.htm

[2] CDC National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention, *New hepatitis c infections nearly tripled over five years*, (Atlanta, GA, CDC, 2017), https://www.cdc.gov/nchhstp/newsroom/2017/Hepatitis-Surveillance-Press-Release.html

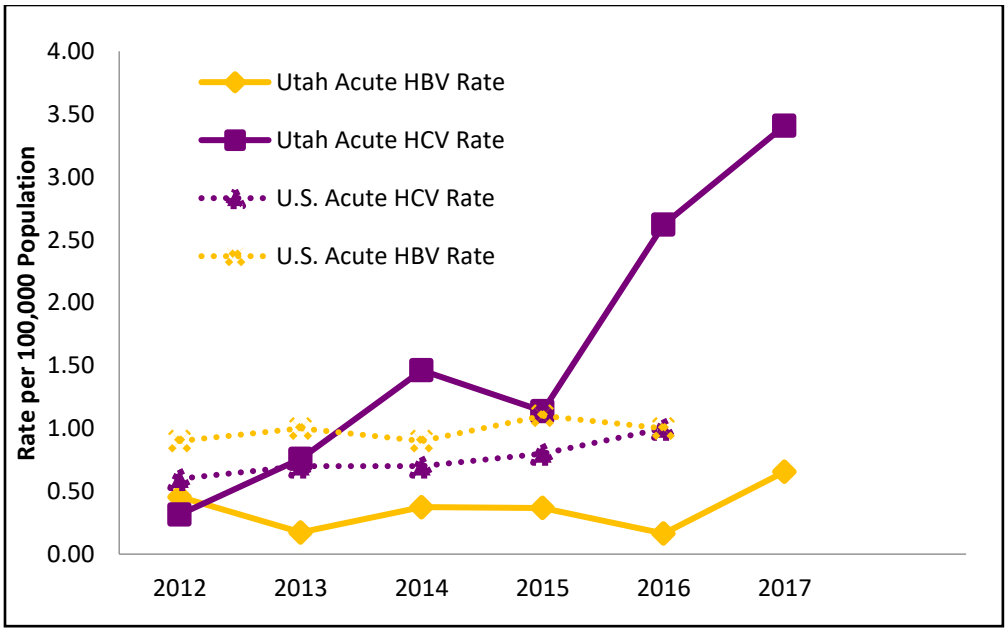
Table 1. Acute HBV Cases, Utah, 2017

2017 Hepatitis B, Acute (N= 19)		
Demographic Characteristic	**Case Counts**	**Percentage**
Age Group		
0-17	0	0.0%
18-24	0	0.0%
25-34	4	21.1%
35-44	4	21.1%
45-54	8	42.1%
55-64	3	15.8%
65+	0	0.0%
Sex		
Male	12	63.2%
Female	7	36.8%
LHD		
Bear River	0	0.0%
Central	0	0.0%
Davis	3	15.8%
Salt Lake	14	73.7%
Southeast	0	0.0%
Southwest	0	0.0%
Summit	0	0.0%
Tooele	0	0.0%
Tri-County	0	0.0%
Utah	2	10.5%
Wasatch	0	0.0%
Weber/Morgan	0	0.0%
San Juan	-	-

Table 2. Acute HCV Cases, Utah, 2017

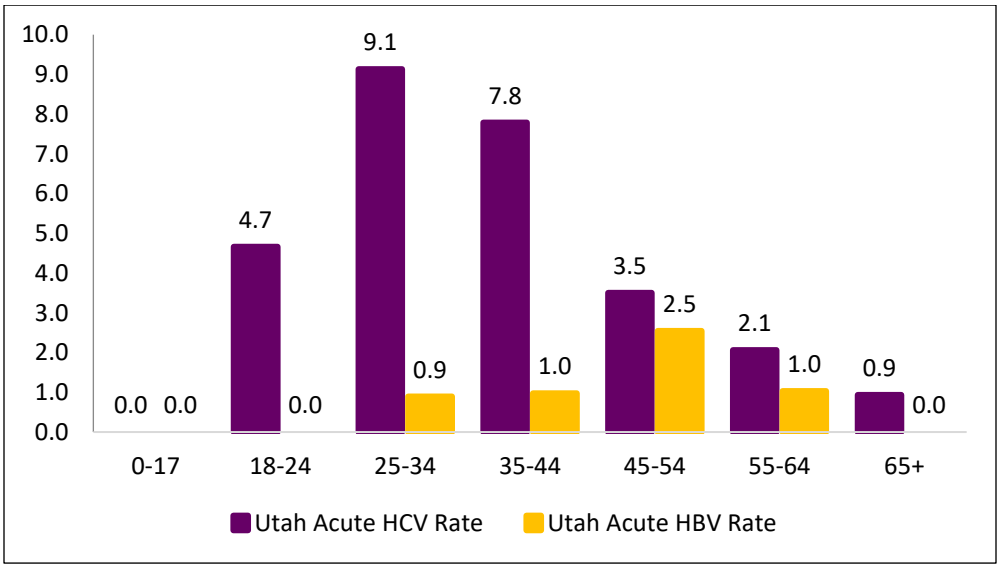
2017 Hepatitis C, Acute (N= 104)		
Demographic Characteristic	**Case Counts**	**Percentage**
Age Group		
0-17	0	0.0%
18-24	16	15.4%
25-34	38	36.5%
35-44	31	29.8%
45-54	10	9.6%
55-64	6	5.8%
65+	3	2.9%
Sex		
Male	57	54.8%
Female	47	45.2%
LHD		
Bear River	3	2.9%
Central	1	1.0%
Davis	5	4.8%
Salt Lake	66	63.5%
Southeast	2	1.9%
Southwest	6	5.8%
Summit	0	0.0%
Tooele	0	0.0%
Tri-County	0	0.0%
Utah	8	7.7%
Wasatch	1	1.0%
Weber/Morgan	12	11.5%
San Juan	-	-

Figure 1. Acute HBV and HCV Rates, Utah and U.S., 2012–2017*



*Acute HCV reporting criteria changed in 2017 to include confirmed and probable cases. Before 2017, only confirmed cases were included.

Figure 2. Acute HBV and HCV Rates by Age Group, Utah, 2017



Syringe Service Programs in Utah

Currently, the U.S. is experiencing an opioid epidemic. With an increase in IDU, acute HBV and acute HCV rates are on the rise. Nationally and statewide, the majority of acute HCV infections are due to IDU and drug supplies and equipment sharing, which increase the likelihood of blood-to-blood contact. Although less common, acute HBV infections are also increasing primarily due to blood exposure during IDU[2]. As a response to the opioid epidemic and increasing number of persons who inject drugs (PWID), syringe service programs (SEPs) are developing in states and cities nationwide to decrease disease transmission. In addition to providing sterile syringes and injection drug equipment, SEPs provide linkage to treatment and care, vaccination, wound care, overdose prevention education and naloxone, and bloodborne pathogen testing. In 2016, the Utah Legislature passed legislation that legalized SEPs, allowing for the opportunity to provide these services to community residents. Syringe services in Utah officially began on December 1, 2016.

Table 3. Syringe Service Data, Utah, 2017

Number of syringes collected	76,666
Number of syringes distributed	131,682
Return ratio	1.72
Number of new clients	1,020
Number of unique clients served	1,208
Total number of encounters	5,104
Self-reported HCV-positive clients	70

At SEP intake, new clients utilizing UDOH funding are required to complete enrollment and intake forms. These forms assess risk and collect basic demographic data on the client. The maps included below indicate syringe exchange utilization by county of residency for unique syringe exchange clients as well as rates of acute HBV and acute HCV by local health district; however, county of residence is unknown for 75 SEP clients. The greatest acute HCV burden occurred in Salt Lake County, Southeast Utah, and Weber-Morgan Health Districts.

Figure 3. SEP Client Residency by County and Acute HBV Rates by Local Health District, Utah, 2017

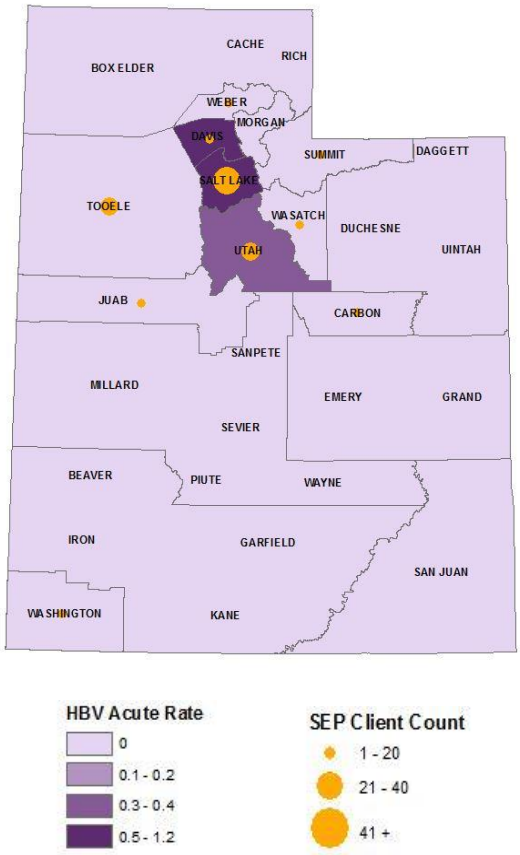
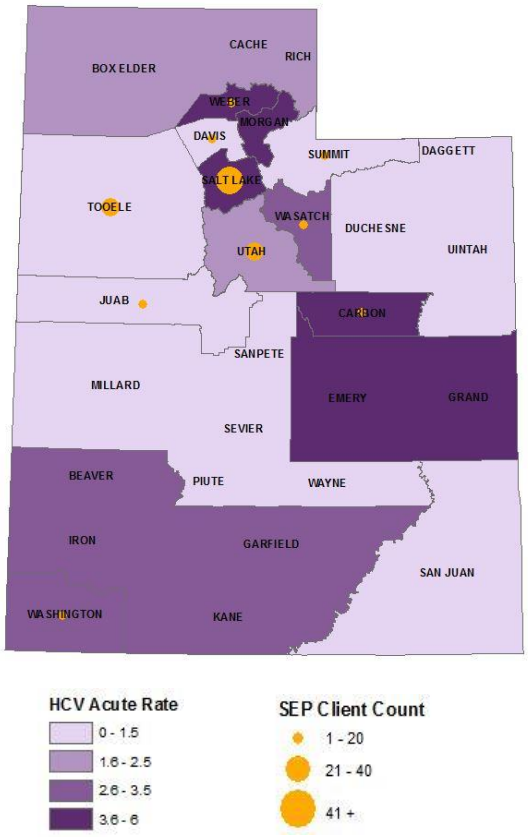


Figure 4. SEP Client Residency by County and Acute HCV Rates by Local Health District, Utah, 2017



CI not taken into account. Use caution in interpreting; the estimate has a relative standard error greater than 30% and does not meet UDOH standards for reliability.

Opioid Overdose in Utah

While current Utah surveillance data is not adequate to describe the influence that IDU has on acute HBV and HCV infection trends, the Utah Division of Substance Abuse and Mental Health (DSAMH) has identified an increased rate of non-medical opioid use. Supporting the hypothesis that increased rates of IDU have resulted in elevated rates of acute HBV and HCV infections in the 25–44 age group, DSAMH identified that individuals between the ages of 25–34 are most likely to be treated for opioid disorders. In 2016, client treatment data indicated that of 5,722 opioid treatment admissions, 47.2% (n=2,703) were in the 25–34 age group, followed by 19.6% (n=1,119) in the 18–24 age group, and 19.3% (n=1,107) in the 34–44 age group. Currently, drug poisoning deaths are the leading cause of injury-related deaths in Utah, with opioid-related drug poisoning being the number one cause; on average, eight opioid overdose deaths occur in Utah every week.

Figure 5. Number of Occurrent Opioid Overdose Deaths by Type of Opioid, Utah, 2000–2016

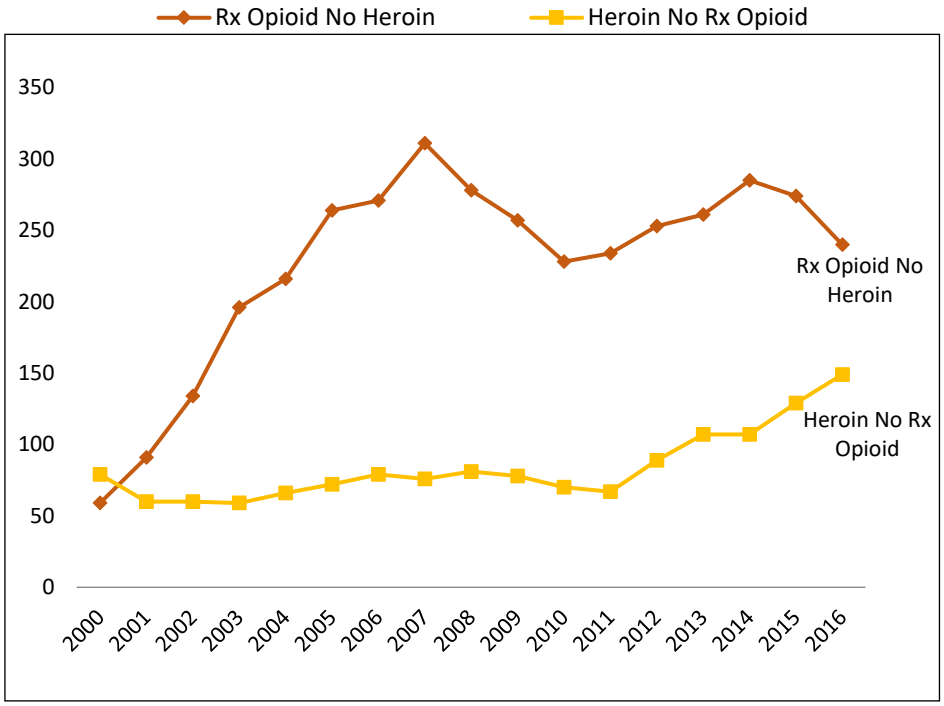
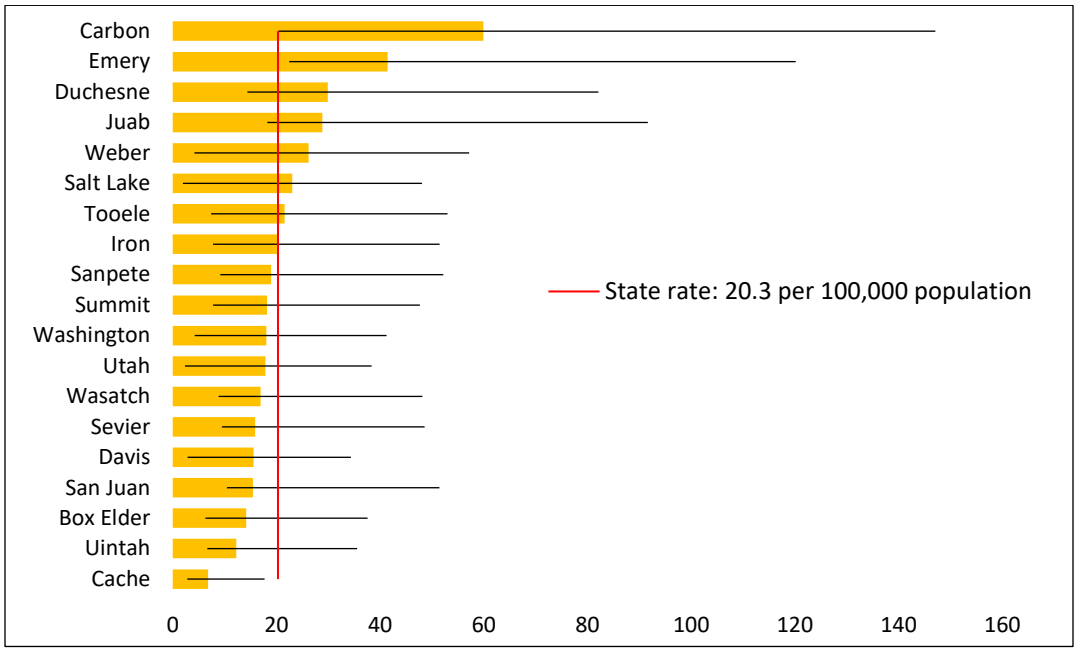


Figure 6. Opioid Overdose Deaths per 100,000 Residents Ages 18+ by County of Death, Utah, 2014–2016



Data Source: Utah Department of Health Utah Violent Death Reporting System.
Data Notes: Rates are based on counts <5 and are suppressed in accordance with privacy and data reliability guidelines.

While the number of prescription opioid overdose deaths decreased 7.3% from 2015 (n=274) to 2016 (n=254), the number of heroin overdose deaths increased by 24.8% between 2015 (n=129) and 2016 (n=161) (Figure 5). Additionally, from 2014 to 2016, Carbon, Emery, Duchesne, Juab, Weber, Salt Lake, and Tooele counties saw above the state average rate for opioid overdose deaths by county of death (Figure 6).

Opioid Overdose Prevention Efforts

Between January 1, 2017 and June 30, 2017, $236,037 was awarded to 17 law enforcement agencies, five local health departments, and nine direct service agencies for opioid overdose prevention efforts in Utah. In total, 1,967 naloxone kits were disseminated and 46 lives were saved by utilizing these kits to reverse an overdose. Additionally, several overdose outreach providers did not receive funding through the UDOH, Opiate Overdose Outreach Pilot Program, but voluntarily participated in naloxone distribution efforts during the same time period. These providers reported that 1,183 naloxone kits were disseminated and 25 lives were saved by utilizing these kits.

Shared data and combined efforts from the UDOH Disease Response, Evaluation, Analysis, and Monitoring (DREAM) Program, Prevention Treatment and Care Program (PTCP), and the Violence and Injury Prevention Program (VIPP), supported by funding from the Centers for Disease Control and Prevention, resulted in this publication with an aim to decrease the number of opioid related deaths in Utah. These programs coordinate efforts to increase confirmatory testing for HCV, increase access to substance abuse treatment facilities, and increase collaboration with local health departments.