

State of Iowa
Hepatitis C Virus
End-of-Year 2017
Surveillance Report



Hepatitis C Virus (HCV) End-of-Year Surveillance Report: 2017

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Executive Summary

Here are a few points drawn from our hepatitis C (HCV) data:

- **1,430 Iowans Diagnosed with Chronic HCV:** In 2017, Iowa experienced an overall decrease in the number of people diagnosed with hepatitis C, which was caused by a significant decrease in the number of people under 40 who were diagnosed with HCV. This decrease may be associated with prevention efforts occurring in Iowa. Although the amount of HCV testing occurring at private providers across the state is unknown, it is unlikely that testing decreased in 2017. Specifically, hepatitis C testing at IDPH-funded test sites, Federally Qualified Health Centers, and harm reduction providers in Iowa increased substantially from 2016 to 2017.
- **Sex:** Over two-thirds (63%) of Iowans diagnosed with HCV in 2017 were males. A smaller percentage (57%) of Iowans under 40 with HCV were male.
- **Birth Cohort:** Fifty-five (55) percent of people diagnosed with HCV in 2017 were baby boomers, or those born between 1945 and 1965, while 24% were people born after 1978 (39 years of age and younger). A significantly smaller percentage (1%) of people diagnosed with HCV in 2017 were born before 1945.
- **Race and Ethnicity:** Unlike HIV and STDs, there are not significant racial and ethnic disparities in HCV diagnoses. In 2017, 90% of people diagnosed were non-Hispanic white, 3% of people were Latino, 6% were African American/Black, 1% were Asian, and less than 1% were other races.
- **People Under 40 Year Old Diagnosed with HCV:** There were 348 people under 40 years of age and under diagnosed with chronic HCV in 2017, accounting for 24% of all diagnoses. Among those under 40, 14% were between the ages of 20 and 24, 36% were between 25 and 30, 20% were between 31 and 34, and 27% were between 35 and 39 years old. An analysis of surveillance data indicated that, of the 348 people under the age of 40 who were eligible for follow up, 75% of people reported injection drug use.
- **Iowans Diagnosed with HCV Since 2000:** There have been 24,570 Iowans ever reported to IDPH with current or past HCV. Of those Iowans, 516 were reported before the year 2000, so data, including demographics, are quite limited. Of the 24,570 people reported to IDPH with past or current HCV from 2000 through 2017, 16,497 had evidence of chronic HCV. Of the 8,073 Iowans reported to IDPH with only a positive hepatitis C screening result, it is estimated that 15 to 25% cleared the virus. The remaining 75 to 85% likely have chronic hepatitis C. Among Iowans diagnosed with chronic HCV, nearly half (49%) were baby boomers at diagnosis and 20% were under 40 years old at diagnosis. Nearly two-thirds (63%) were male, and 88% were white, non-Hispanic. It should be noted that race and ethnicity information were not reported for 54% of people diagnosed with HCV and reported to IDPH since 2000.
- **Iowans Diagnosed with HIV and HCV:** An analysis of co-infection of HIV and HCV revealed that 244 Iowans had been reported to IDPH as having both HIV and chronic HCV. Among them, 200 (82%) were alive at the end of 2017, while 44 were deceased, indicating that 9% of people living with HIV have also been diagnosed with chronic HCV. The majority of people who have been diagnosed with HIV and HCV, 79%, were males, and white, 62%.

Organization of the Surveillance Report

This end-of-year report presents surveillance data on hepatitis C in Iowa. It describes hepatitis C for the state and of its population subgroups. There are four sections to the report: Section 1 describes **data sources**; Section 2 is a **narrative summary** with key highlights; Section 3 employs **charts, graphs, and tables** to illustrate trends; and Section 4 outlines the **reporting requirements** for hepatitis C in Iowa.

Definitions

Confirmed chronic HCV means the person has HCV RNA circulating in his or her blood, confirmed by laboratory testing.

HCV antibody positive means that there is a presence of antibodies to HCV within a person's blood. It indicates a person was exposed to HCV and developed chronic infection, but approximately 15 to 25% of people will spontaneously clear the virus without treatment. Therefore, 75 to 85% of people with positive antibody tests likely have chronic HCV.

Section 1: SOURCES OF DATA

Core HCV Surveillance Data

Iowa Disease Surveillance System (IDSS)

HCV data are collected in the Iowa Disease Surveillance System, which is a web-based system designed to facilitate reporting, investigation, and surveillance of communicable diseases in Iowa. HCV is a reportable disease as defined by Iowa Code Chapter 139A. Reports of HCV infection are submitted by local public health, private providers, laboratories, and others. IDSS is not a static database, as cases can be updated daily. Some records had incomplete data, which was a limitation of analysis. It is also unknown who has been cured of their HCV, or who has cleared the infection on their own.

Hepatitis C test results in IDSS were defined as screening or confirmatory by the following criteria:

Screening tests: *(usually reported as positive or negative)*

- HCV Antibody Signal/Cutoff by EIA antibody (See Interpretation & Numeric Result in lab report)
- Serology – HCV antibody (EIA) (positive, negative, equivocal, or not reactive)
- Serology – Anti-HCV antibody test (positive, negative, equivocal, or not reactive)
- Serology – HCV IgG antibody (EIA) (positive, negative, equivocal, not reactive, or See Interpretation & Numeric Result)
- Serology – HCV IgM antibody (EIA) (positive, negative, equivocal, not reactive, or See Interpretation & Numeric Result in lab report)

Confirmatory tests:

- Polymerase Chain Reaction (PCR) (detected, equivocal, indeterminate, not detected, not quantified, or not tested)
- Genotype (detected, not detected, or indeterminate)
- Serology – RNA Qualitative (QL) (positive, negative, equivocal, or not reactive)
- Serology – HCV RIBA (antibody test – does not indicate current infection) (negative or positive)
- Serology – HCV RNA (positive, negative, or not done)
- Serology – HCV DNA QL Log (positive, negative, equivocal, or indeterminate)

Diagnosis Date and Completeness of Surveillance Data

Only persons reported in Iowa and for whom last name, date of birth, sex, and date of diagnosis are known are included in this report. Evaluations of the surveillance system indicate that potentially significant numbers of Iowans with HCV may have never been reported to IDPH. In addition, these data do not include people who have contracted the virus, but who have not been diagnosed. Nationally, CDC estimates that 45 to 85% of people with HCV are undiagnosed.

Co-infection with HIV and HCV

Iowans living with both HIV and HCV were determined by a match between IDSS and the Iowa electronic HIV/AIDS Reporting System (eHARS). All persons living with HIV who were first diagnosed while living in Iowa, or who have lived in Iowa at some point in time while living with HIV, or who have accessed care at an Iowa facility and have been reported to IDPH, are included in eHARS. All reports of HCV as of 12/31/2017 were matched to HIV reports in eHARS as of 12/31/2017. Matches were based on date of birth, last name, and Soundex of first name. Persons reported in both databases were considered to be living with both HIV and HCV.

Population Data

The surveillance program has used the 2017 population estimates from the U.S. Census Bureau (<http://www.census.gov>) to calculate prevalence rates.

Section 2: NARRATIVE SUMMARY

Iowans Diagnosed with Hepatitis C in 2017

There were 1,430 Iowans diagnosed as living with chronic hepatitis C (HCV) in 2017, down 202 (12%) from 1,632 in 2016, and slightly below the average of 1,440 for the previous five years (2012 through 2016). As seen in Figure 3.1, the annual number of people diagnosed with chronic HCV steadily increased from 2000 through 2015, dropped slightly in 2016, and dropped more significantly in 2017. The slight decrease in 2016 was among older Iowans (baby boomers and older), while the significant decrease in 2017 was exclusively among Iowans under 50 years old.

Case Status

There were 2,138 Iowans reported with past or current (chronic) HCV in 2017. Sixty-seven percent had evidence of a confirmatory (PCR) test indicating chronic HCV, while 33% (708) of Iowans had only antibody positive results reported to IDPH. An antibody test for HCV is essentially a screening test. It is estimated that 75 to 85% of people with positive antibody results are living with chronic HCV, while 15 to 25% will clear the virus on their own. In addition, there were 908 Iowans with a positive antibody result and a negative PCR result. These patients may have spontaneously cleared the virus, or had a false antibody positive result. For patients who had a positive antibody result, but were not exposed to HCV, the result was likely false positive. Patients with a rapid antibody result who were exposed to HCV, primarily through injection drug use, likely spontaneously cleared the virus during the acute phase.

Sex

In 2017, 63% of Iowans diagnosed with chronic HCV were males. An analysis of people under 40 reported with HCV reveals that the distribution is slightly different, with males representing 57% of diagnosed Iowans. The change in distribution of HCV among sexes in the under 40 population is important to note, as HCV can be transmitted perinatally.

Birth Cohort

Fifty-five (55) percent of people diagnosed with HCV in 2017 were baby boomers, or those born between 1945 and 1965, while 24% were people born after 1977 (under 40 years old at diagnosis). About 19% of people diagnosed in 2017 were born between 1966 and 1977 (between the ages of 40 years old and 51 years old at diagnosis). A significantly smaller percentage (2%) of people reported with HCV in 2017 were born before 1945.

Ethnicity and Race

Unlike HIV and STDs, there are not significant racial and ethnic disparities in HCV diagnoses. In 2017, 90% of people diagnosed were non-Hispanic white, 3% of people were Hispanic/Latino, 5% were black/African American, 1% were Asian, and less than 1% were other races.

Iowans Under 40 Diagnosed with Hepatitis C in 2017

There were 348 Iowans under 40 diagnosed with chronic HCV in 2017, representing 24% of all Iowans diagnosed. This represents a significant decrease compared to 2016. Among those under 40 diagnosed in 2017, 3% were under 20 years old, 14% were between the ages of 20 and 24, and 31% were between 25 and 29 years old, 25% were between 30 and 34 years old, and 27% were between 31 and 39 years of age. There were no reports of diagnosed HCV among Iowa children under 13 years old in

2017 that met the case definition of perinatal hepatitis C. An analysis of surveillance data indicated that, of the 348 people under 40 who were eligible for follow up, 75% of people disclosed injection drug use to their health care providers. Race and ethnicity of lowans under 40 diagnosed with HCV was similar to the overall population. Ninety-one percent of lowans under 40 diagnosed with HCV in 2017 identified as white, 4% identified as Latino, 4% identified as Black/African American, and less than 1% identified as other races.

lowans Ever Diagnosed with HCV

There have been 24,570 lowans ever reported to IDPH with current or past HCV. Among those lowans, 516 were reported before the year 2000, so data are quite limited. Of the 24,570 people reported to IDPH with past or current HCV from 2000 through 2017, 16,497 had evidence of chronic HCV. This means that a positive HCV RNA result was reported for these lowans. Of the 8,073 lowans reported to IDPH with only a positive hepatitis C screening result, it is estimated that 15 to 25% cleared the virus. The remaining 75 to 85% likely have chronic hepatitis C. Among lowans diagnosed with chronic HCV since 2000, nearly half (49%) were baby boomers at diagnosis and 20% were under 40 years old at diagnosis. Nearly two-thirds (63%) were male, and 88% were white, non-Hispanic. It should be noted that race and ethnicity information were not reported for 54% of people diagnosed with HCV and reported to IDPH since 2000. Active surveillance of hepatitis C did not begin until 2015 in Iowa, which limited the completeness of data reporting. Fourteen percent of lowans reported with chronic HCV since 2000 have had genotype testing, which may be indicative of hepatitis C treatment.

Deaths of Persons with Hepatitis C

Since 2000, the number of lowans dying from hepatitis C-related causes has increased. There were 352 lowans with hepatitis C who died in 2017. There were 1,598 lowans with hepatitis C who died between 2000 and 2017. The number of deaths among lowans diagnosed with hepatitis C in 2017 was a 47% increase from 2016. Cause of death was not necessarily related to their hepatitis C diagnosis. The increase in the number of deaths in 2017 may be because of increased testing among baby boomers, which has increased the number of diagnoses among that population over the years. Mortality from hepatitis C is likely underestimated, as death certificates often underreport HCV infection, and many people with HCV are still undiagnosed.

HIV and HCV Co-infection

An analysis of lowans with HIV and HCV revealed that 244 lowans had been reported to IDPH since 2000 as diagnosed with both HIV and chronic HCV. Among them, 200 (82%) were alive at the end of 2017, while 44 were deceased, indicating that 9% of people living with HIV have also been diagnosed with chronic HCV. Ryan White Part C clinics have been making concerted efforts to treat lowans living with HIV for their HCV. HCV treatment is covered by the AIDS Drug Assistance Program (ADAP). The majority of people who have been diagnosed with HIV and HCV, 79%, were males, and white, 62%. It is important to note that, while 4% of lowans diagnosed with HCV identify as black or African American, 25% of lowans with both HIV and HCV are black or African American.

Estimation of Prevalence of HCV in Iowa

As of December 31, 2017, there were 24,570 lowans reported to IDPH with either past or current (chronic) hepatitis C. Among these lowans, 16,497 had evidence of chronic infection, while 8,073 had only positive antibody (screening) results reported. The Centers for Disease Control and Prevention

estimates that 15 to 25% of people with HCV clear the infection spontaneously, so it's likely that 75 to 85% of the 8,073 people with antibody only results reported actually have chronic HCV infection.

IDPH-Funded or IDPH-Supported Hepatitis C Testing in 2017

The number of HCV tests administered in 2017 that were IDPH-funded or through IDPH-supported efforts increased significantly in 2017. There were 10 IDPH-funded test sites across the state that administered HIV testing, HCV testing, and hepatitis A/B immunizations in 2017. The number of HCV tests administered in 2017 increased over 240% from 2016 to 2017, with 2,153 HCV tests administered. The number of HCV tests administered at Federally Qualified Health Centers across Iowa increased 66% from 2016 to 2017, with 8,209 tests administered. IDPH supported this testing through a partnership with the Primary Care Association.

Hepatitis C Surveillance Activities

Hepatitis C surveillance began in 2015 at the Iowa Department of Public Health in the Bureau of HIV, STD, and Hepatitis. IDPH conducted surveillance follow up with healthcare providers of Iowans diagnosed with HCV who were 30 years old or under to collect injection drug use behavior information. The cutoff age of 30 was chosen because other states were reporting increases in diagnoses in residents 30 and under. However, analyses of Iowa's hepatitis C surveillance data indicate that Iowans 30 to 39 are also experiencing increases in diagnoses, potentially associated with the expanding number of people who inject drugs related to the opioid epidemic. Therefore, the cutoff age for HCV surveillance follow up was increased to 39, effective January 1, 2017.

Starting January 1, 2018, IDPH began surveillance follow up with healthcare providers for all Iowans reported to IDPH with hepatitis C positive test results who did not have evidence of a confirmatory test.

Section 3: TABLES AND FIGURES

Table 3.1 Iowans Diagnosed and Reported with Chronic Hepatitis C in 2017

Characteristics	Iowans Diagnosed with Chronic HCV	
	Number	(%)
Sex at Birth		
Male	898	(63)
Female	532	(37)
Age at Diagnosis		
Under 20 years old	12	(<1)
20 – 29 years old	156	(11)
30 – 39 years old	180	(13)
40 – 49 years old	185	(13)
50 – 59 years old	521	(36)
60 – 69 years old	335	(23)
70 years old and above	41	(3)
Birth Cohort Year		
Under 40 (0 - 39)	348	(24)
Baby Boomers (52 - 72)	790	(55)
Born before 1945 (73 and older)	20	(1)
All other ages (40 - 51)	272	(19)
Ethnicity/Race		
Hispanic/Latino, All Races	43	(3)
Not Hispanic, White	1,291	(90)
Not Hispanic, Black/African American	80	(6)
Not Hispanic, Asian	10	(1)
Not Hispanic, Native Hawaiian/Pacific Islander	0	(0)
Not Hispanic, American Indian/Alaska Native	6	(<1)
Not Hispanic, Multi-race	0	(0)
Result Type		
Polymerase Chain Reaction (PCR)	1,357	(95)
HCV recombinant immunoblot assay (RIBA)	2	(<1)
Genotype	71	(5)
Case Status		
Confirmed HCV (positive confirmatory result)	1,430	-
Past or current HCV (positive screening test)	708	-
Totals	1,430	(100)

Table 3.2 Iowans Under 40 Diagnosed and Reported with Chronic Hepatitis C in 2017

Characteristics	People reported with HCV Diagnosis	
	Number	(%)
Sex at Birth		
Male	198	(57)
Female	150	(43)
Age at Diagnosis		
Under 20	12	(3)
20 - 24	47	(14)
25 - 29	109	(31)
30 - 34	87	(25)
35 - 39	93	(27)
Reported Injection Drug Use		
Yes	262	(75)
No	78	(22)
Unknown	8	(2)
Not Assessed (patient under age 13)	0	(0)
Ethnicity/Race		
Hispanic/Latino, All Races	15	(4)
Not Hispanic, White	316	(91)
Not Hispanic, Black/African American	13	(4)
Not Hispanic, Asian	2	(<1)
Not Hispanic, Native Hawaiian/Pacific Islander	0	(0)
Not Hispanic, American Indian/Alaska Native	2	(<1)
Not Hispanic, Multi-race	0	(0)
Case Status		
Confirmed HCV (positive confirmatory result)	348	-
Past or current HCV (positive screening test)	67	-
TOTALS	348	(100)

Table 3.3 Iowans Diagnosed and Reported with Chronic HCV from 2000 through 2017

Characteristics	People reported with HCV Diagnosis	
	Number	(%)
Sex at Birth		
Male	10,400	(63)
Female	5,883	(36)
Other	4	(<1)
Unknown	210	(1)
Age at Diagnosis		
Under 40 years old	3,327	(20)
Under 20 years old	178	(1)
20 – 29 years old	1,244	(8)
30 – 39 years old	1,905	(12)
40 – 49 years old	3,570	(22)
50 – 59 years old	6,356	(39)
60 – 69 years old	2,769	(17)
70 years old and above	475	(3)
Birth Year		
Born after 1985	1,122	(9)
Born between 1966 and 1985	4,182	(25)
Born between 1945 and 1965 (Baby Boomers)	10,638	(64)
Born before 1945	555	(3)
Ethnicity/ Race*		
Hispanic/Latino, All Races	222	(3)
Not Hispanic, White	6,630	(88)
Not Hispanic, Black/African American	518	(1)
Not Hispanic, Asian	93	(1)
Not Hispanic, Native Hawaiian/Pacific Islander	7	(<1)
Not Hispanic, American Indian/Alaska Native	62	(1)
Not Hispanic, Multi-race	16	(<1)
Result Type		
Polymerase Chain Reaction (PCR)	12,825	(78)
HCV recombinant immunoblot assay (RIBA)	1,290	(8)
Genotype	2,382	(14)
Diagnosed with HIV and Chronic HCV		
Diagnosed with HIV and HCV, Alive	200	(82)
Diagnosed with HIV and HCV, Deceased	43	(18)
Case Status		
Confirmed HCV (positive confirmatory result)	16,497	-
Past or current HCV (positive screening test)	8,073	-
TOTAL	16,497	(100)

*Race and ethnicity data were missing for 57% (n=14,109) of case reports from 2000 through 2017. The percentages for racial and ethnic groups were calculated using a denominator of 10,205.

Table 3.4 Iowans Diagnosed and Reported with Both HIV and Chronic HCV, 2000 – 2017

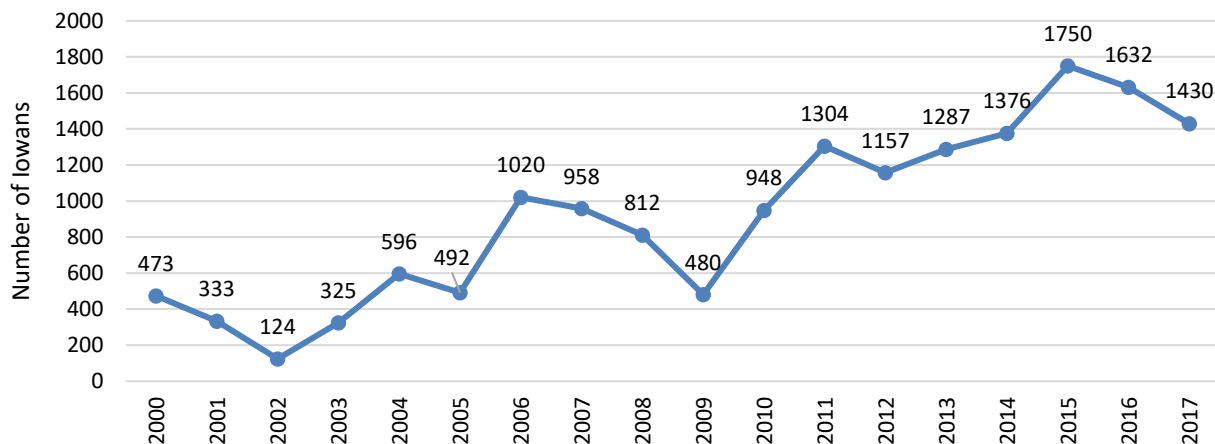
Characteristics	People Co-Infected	
	Number	(%)
Sex at Birth		
Male	193	(79)
Female	50	(21)
Birth Cohort Year		
Born after 1985	4	(3)
Born between 1966 and 1985	95	(39)
Born between 1945 and 1965 (Baby Boomers)	141	(58)
Born before 1945	3	(1)
Ethnicity/ Race*		
Hispanic/Latino, All Races	16	(7)
Not Hispanic, White	152	(63)
Not Hispanic, Black/African American	60	(25)
Not Hispanic, Asian	6	(2)
Not Hispanic, Native Hawaiian/Pacific Islander	0	(-)
Not Hispanic, American Indian/Alaska Native	0	(-)
Not Hispanic, Multi-race	9	(4)
Vital Status (as of Dec. 31, 2017)		
Alive	200	(82)
Deceased	43	(18)
TOTALS	243	(100)

Trends in Iowans Diagnosed with Hepatitis C

Number of Iowans Diagnosed with Chronic HCV

The number of Iowans diagnosed with chronic, confirmed hepatitis C in 2017, 1,430, is a slight decrease from the 5-year average of 1,440 (2012 through 2016), and a 12% decrease since 2016. The decrease experienced in 2017 was solely among Iowans under 50 years old, with the largest decrease occurring among Iowans under 40 years old.

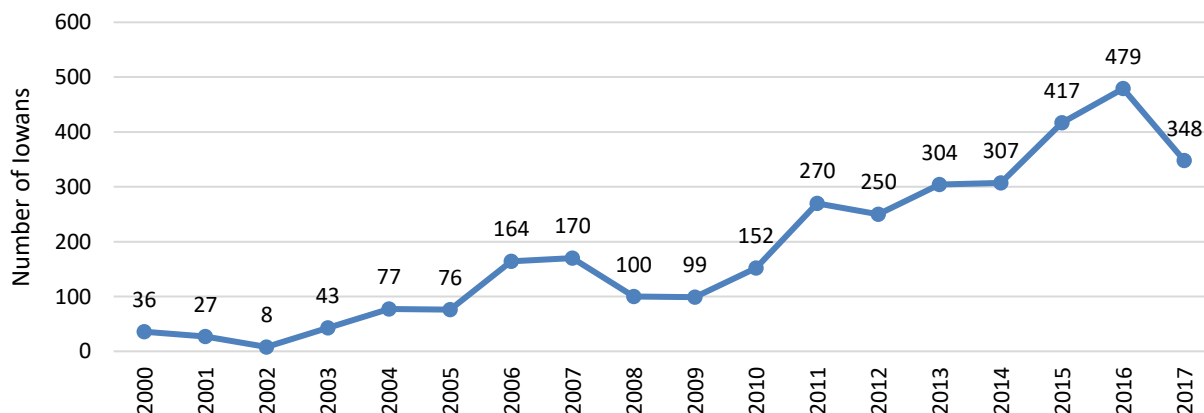
Figure 3.1:
Number of Iowans Diagnosed with Chronic HCV: 2000 - 2017



Number of Iowans Under 40 Diagnosed with Chronic HCV

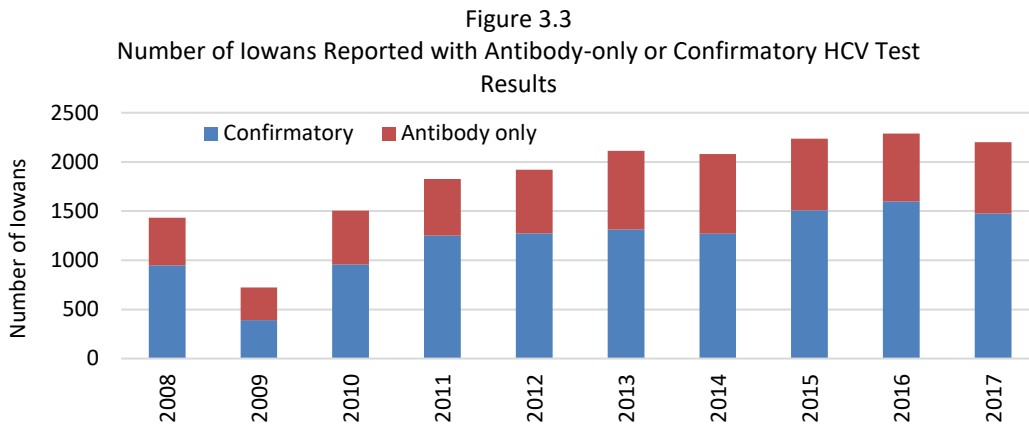
The number of Iowans under 40 diagnosed with confirmed HCV increased steadily from 2000 (36) through 2016 (479), then decreased by over one-quarter from 2016 to 2017. This significant decrease occurred primarily within the eastern and central regions of Iowa. Although the exact cause of the decrease is unknown, it may be associated with needle exchange programs operating through the eastern and central regions of the state.

Figure 3.2:
Number of Iowans Under 40 Diagnosed with Chronic HCV: 2000 - 2017



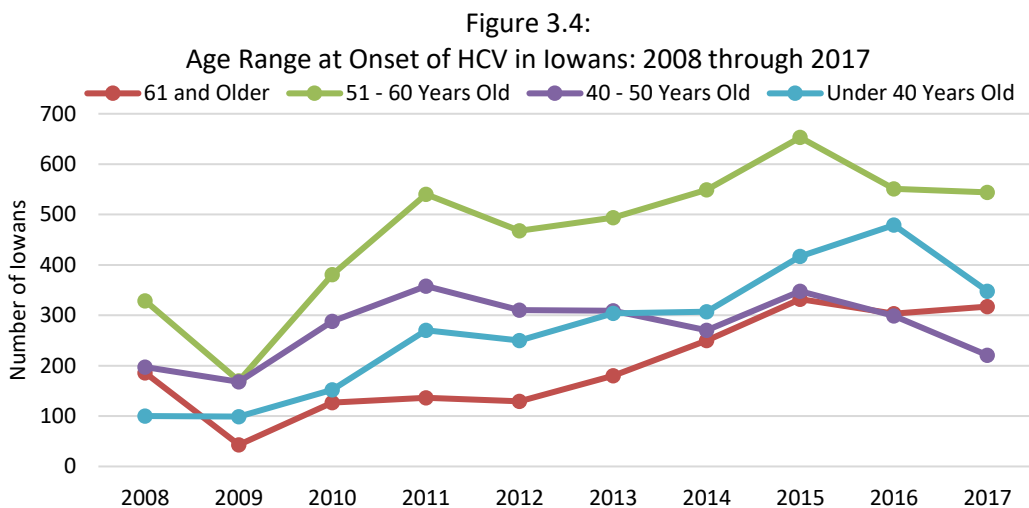
Proportion of lowans Reported with Confirmed or Unconfirmed (Antibody) HCV

In order to determine whether a person has chronic HCV, a confirmatory (i.e., RNA PCR) test must be administered. In 2017, 67% of the 2,138 lowans reported to IDPH with HCV had evidence of a positive confirmatory test, while 33% of lowans had only screening (antibody) results reported. The proportion of people was in line with increases observed during the preceding few years. Starting January, 2018, the IDPH Hepatitis Data Coordinator began following up with medical providers who report patients with a hepatitis C antibody positive result, without evidence of a confirmatory result. The purpose of this follow up is to inform providers of the testing algorithm for hepatitis C to ensure all lowans with a hepatitis C positive screening result receive confirmatory testing.



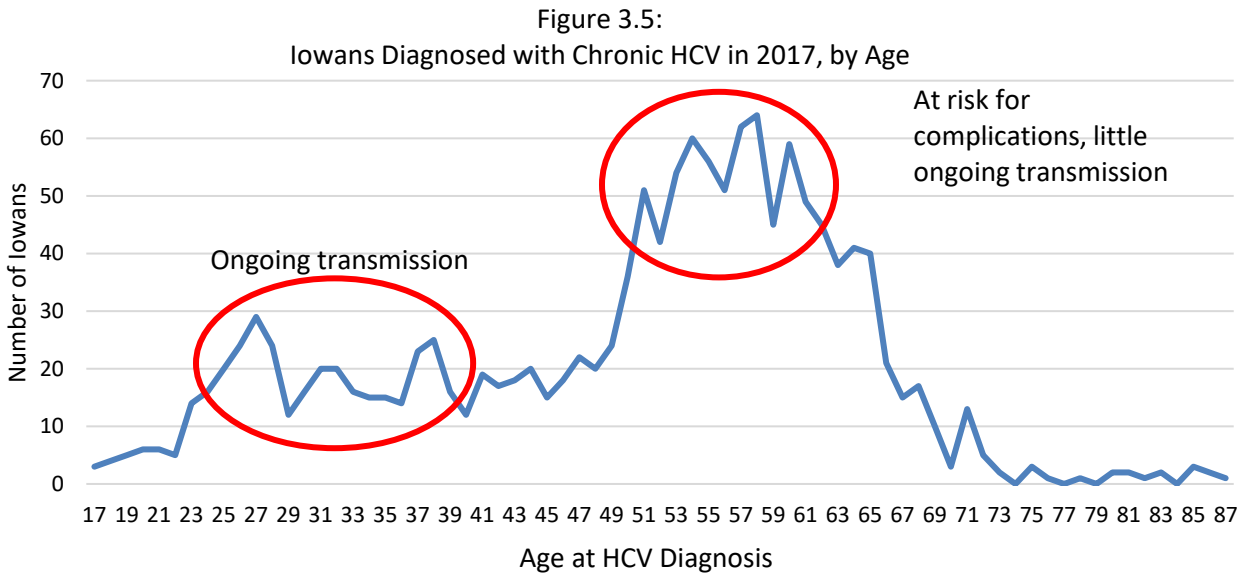
Number of lowans Reported with Chronic HCV, by Age Range at Onset

The numbers of lowans in all age groups diagnosed with HCV since 2008 have increased, but rates of increase vary by age range. There were 348 lowans under 40 diagnosed with chronic HCV in 2017, which was a 27% decrease compared to 2016. There were 221 lowans ages 40 to 50 diagnosed with chronic HCV in 2017, representing a 26% decrease from 2016. lowans between 51 and 60 years old experienced 544 diagnoses in 2017, which was almost the same as 2016. lowans 61 years of age and older experienced an increase in diagnoses in 2017, with 317 diagnoses, up 5% from 2016.



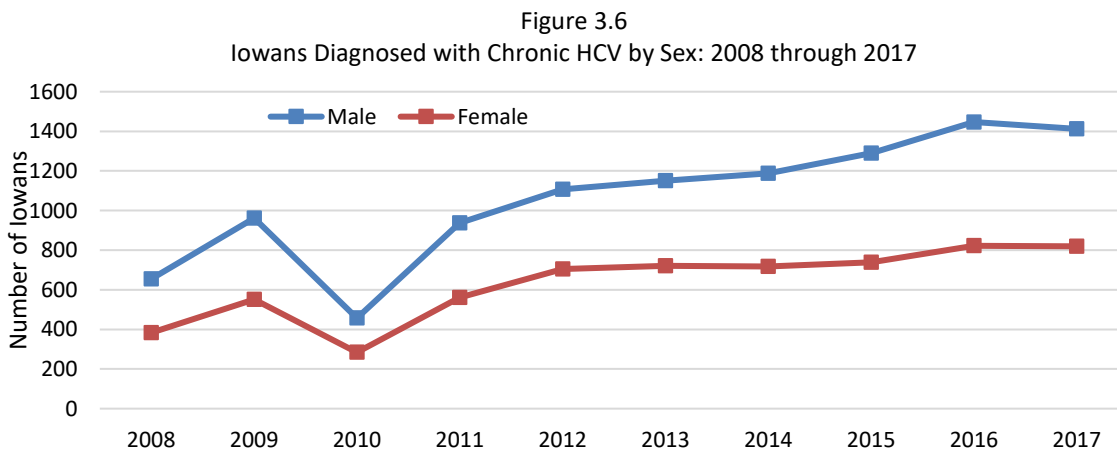
Age at Onset of HCV in 2017

There were definite peaks in the ages of Iowans diagnosed with hepatitis C in 2017. Iowans under 40 diagnosed with HCV represent those who likely contracted the virus from current or recent injection drug use and may be transmitting the virus to others, although they are unlikely to have yet experienced health complications related to HCV. Iowans older than 50 diagnosed with HCV are at risk for health complications, but likely acquired the virus decades ago and are unlikely to transmit.



Number of Iowans Diagnosed with Chronic HCV in 2017, by Sex

Hepatitis C virus disproportionately impacts males. From 2000 through 2017, there were about three males diagnosed for every two females diagnosed. It’s important to note that this varies by age. For people 40 and younger diagnosed with HCV, the ratio of diagnoses among males and females is lower.

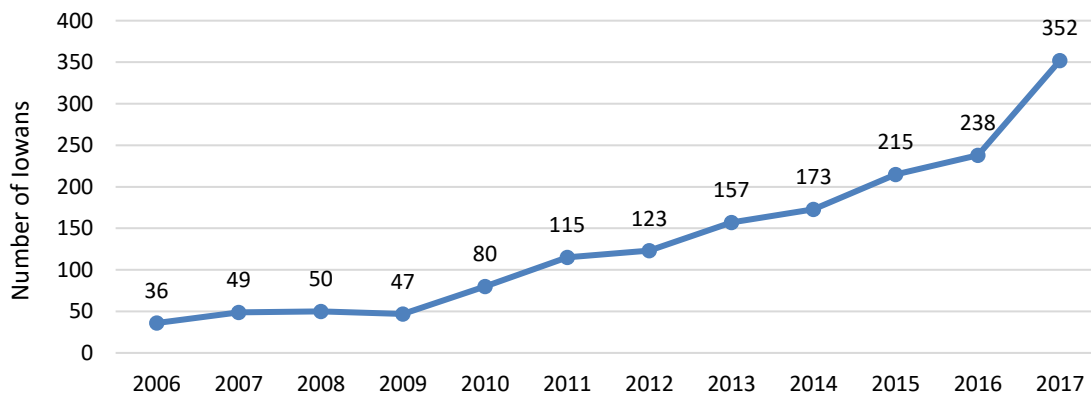


Deaths of Iowans with Hepatitis C

The number of Iowans with hepatitis C who have died has generally increased annually since 2000, to 352 in 2017. This is not unexpected, as the number of Iowans diagnosed with HCV has increased. This was determined by matching the HCV surveillance data with the National Death Index.

In addition, an analysis of death certificate data indicated that between 2000 and 2017, there were 1,598 Iowans who died from hepatitis C-related causes, meaning that hepatitis C was listed on the death certificate. Mortality from hepatitis C is likely underestimated, as death certificates often underreport HCV infection.

Figure 3.7:
Deaths of HCV-positive Iowans: 2006 through 2017

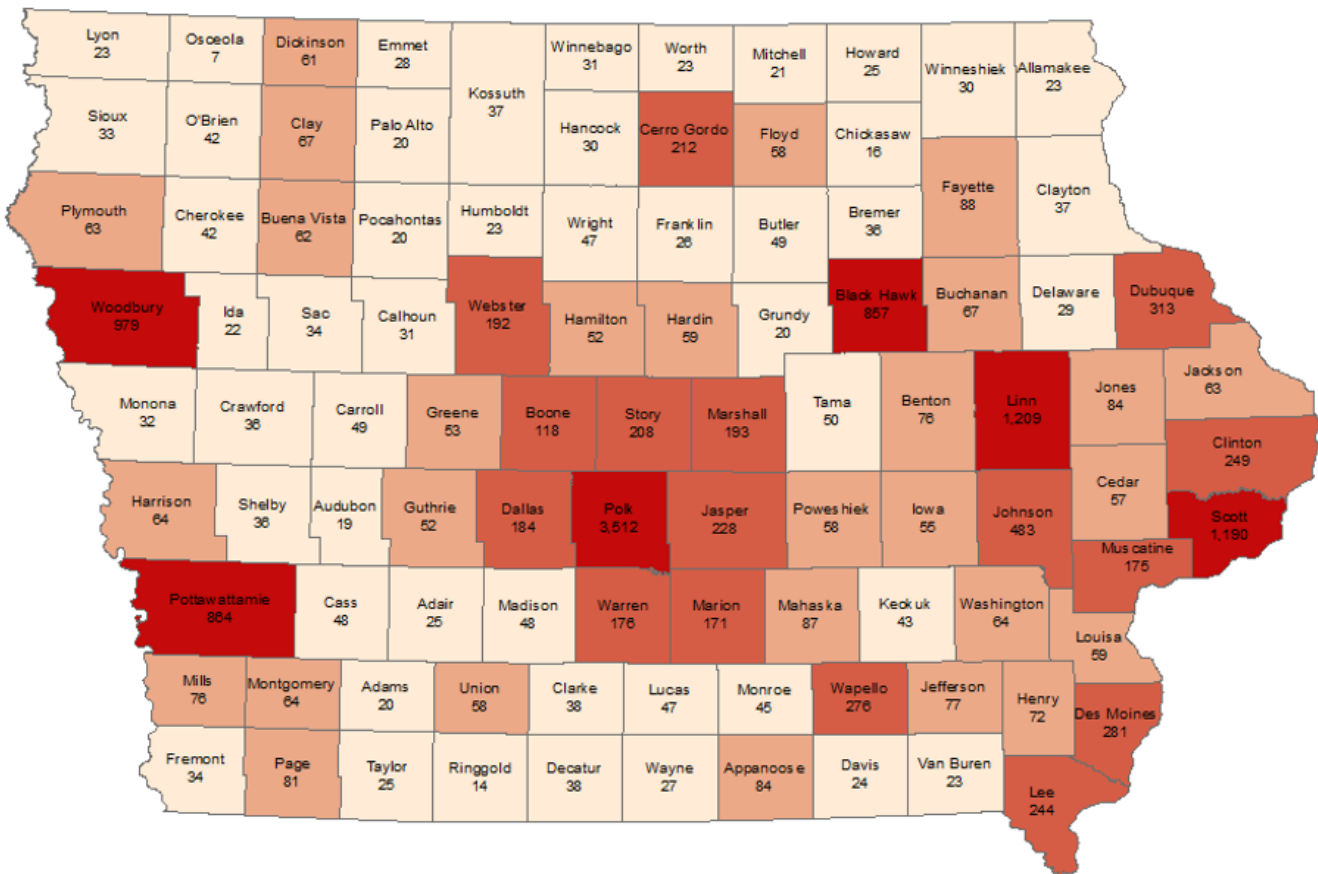


Iowans Diagnosed with HIV and Chronic HCV

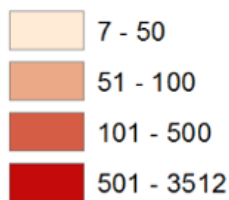
In the United States, it is estimated that 25% of persons with HIV also have hepatitis C¹. Co-infection with HIV and HCV is particularly common among people who inject drugs. Iowa is a low prevalence state for HIV disease. At the end of 2017, there were 2,790 persons living with HIV in Iowa. People who inject drugs represented 8% of people diagnosed in 2015, 3% in 2016, and 5% in 2017. To ascertain co-infections of HIV and HCV among Iowans, the HIV surveillance system was matched with the HCV surveillance system for Iowans diagnosed through 2017. A total of 243 persons were ever reported to IDPH as having both HIV and chronic HCV. Of those people, 200 were alive at the end of 2017 and living in Iowa, indicating that 7% of Iowans with HIV have also been diagnosed with chronic HCV. This is likely an underestimate, as previous analyses have indicated that up to half of people co-infected have not been reported to IDPH as being diagnosed with HCV. The majority of people who have both HIV and HCV, 79%, were males, and white, 63%.

¹ Centers for Disease Control and Prevention. (2015). *HIV/AIDS and Viral Hepatitis*. Retrieved from www.cdc.gov.

Figure 3.8
Number of Iowans Diagnosed with HCV from 2000 through 2017,
by County of Residence at Diagnosis

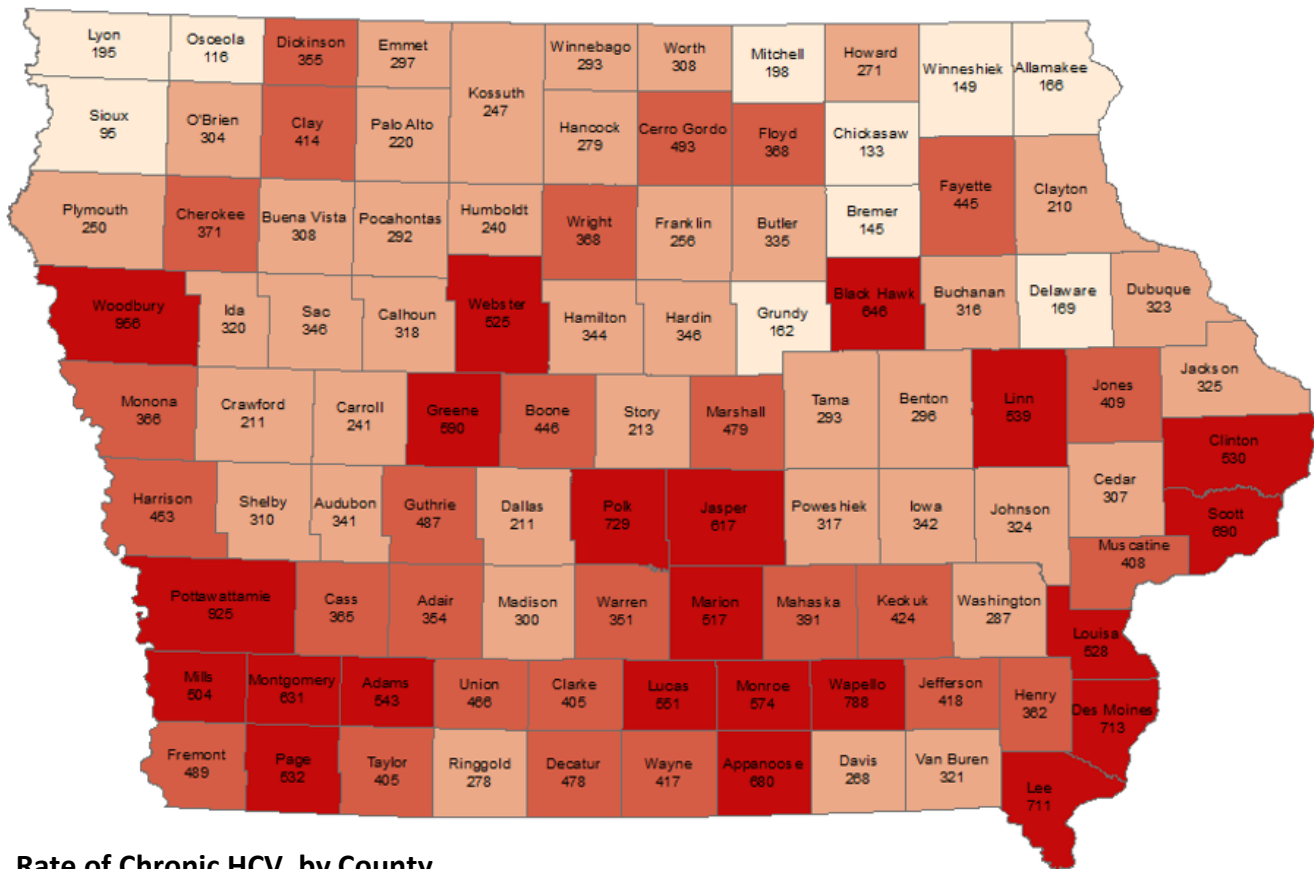


Number of Iowans with Chronic HCV

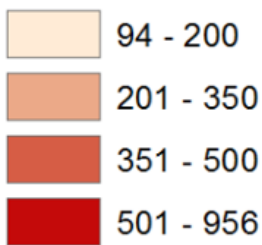


This map shows the county of residence for Iowans reported with chronic HCV from January 1, 2000, through December 31, 2017. It indicates counties where persons were living at the time of diagnosis. There were 796 Iowans reported without residence information, so this map reflects 15,701 out of the 16,497 Iowans who have been reported with hepatitis C.

Figure 3.9
Rates of HCV per 100,000 Population by
County of Residence at Diagnosis



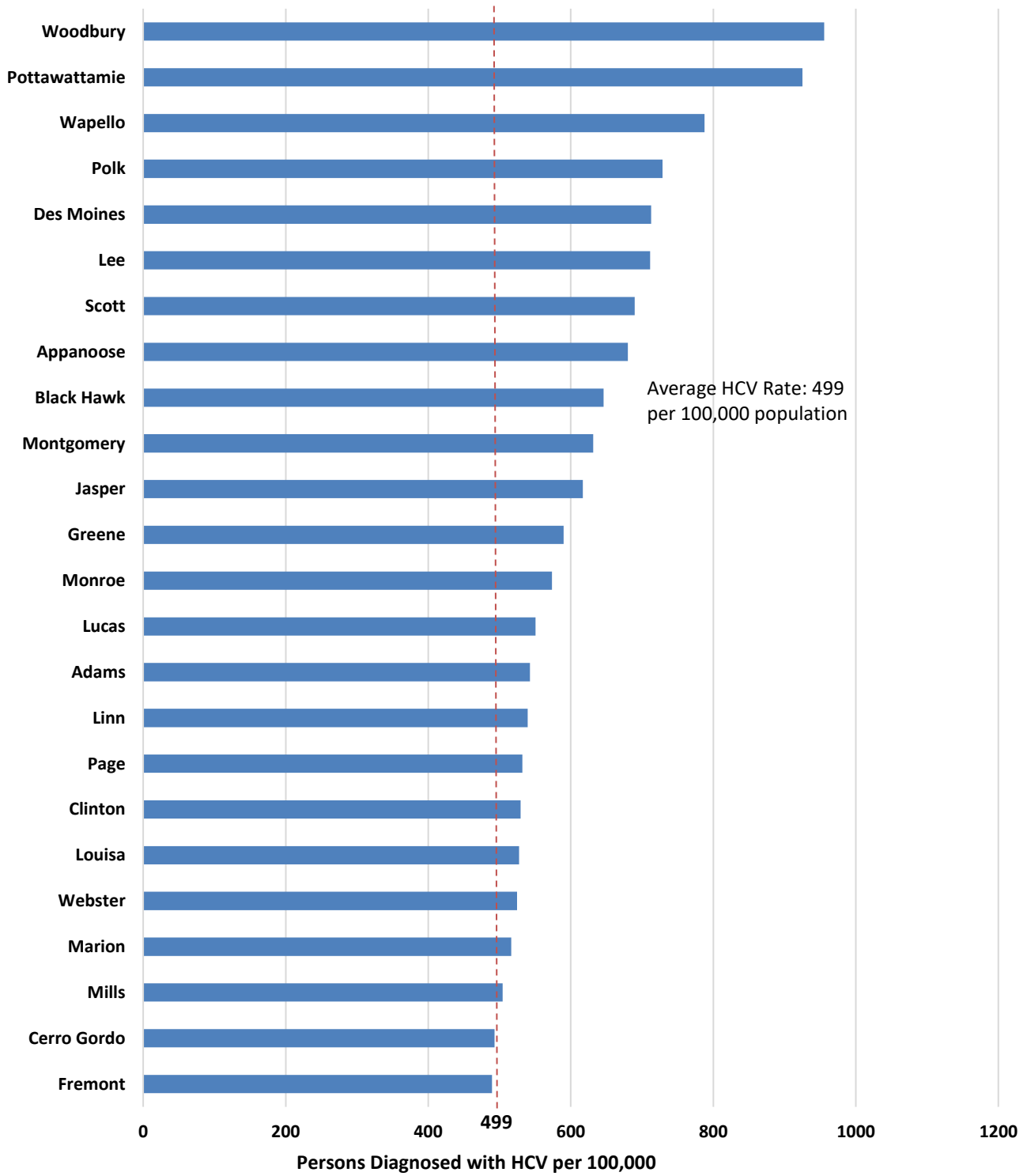
Rate of Chronic HCV, by County



State Average Chronic HCV Rate: 499 per 100,000 population

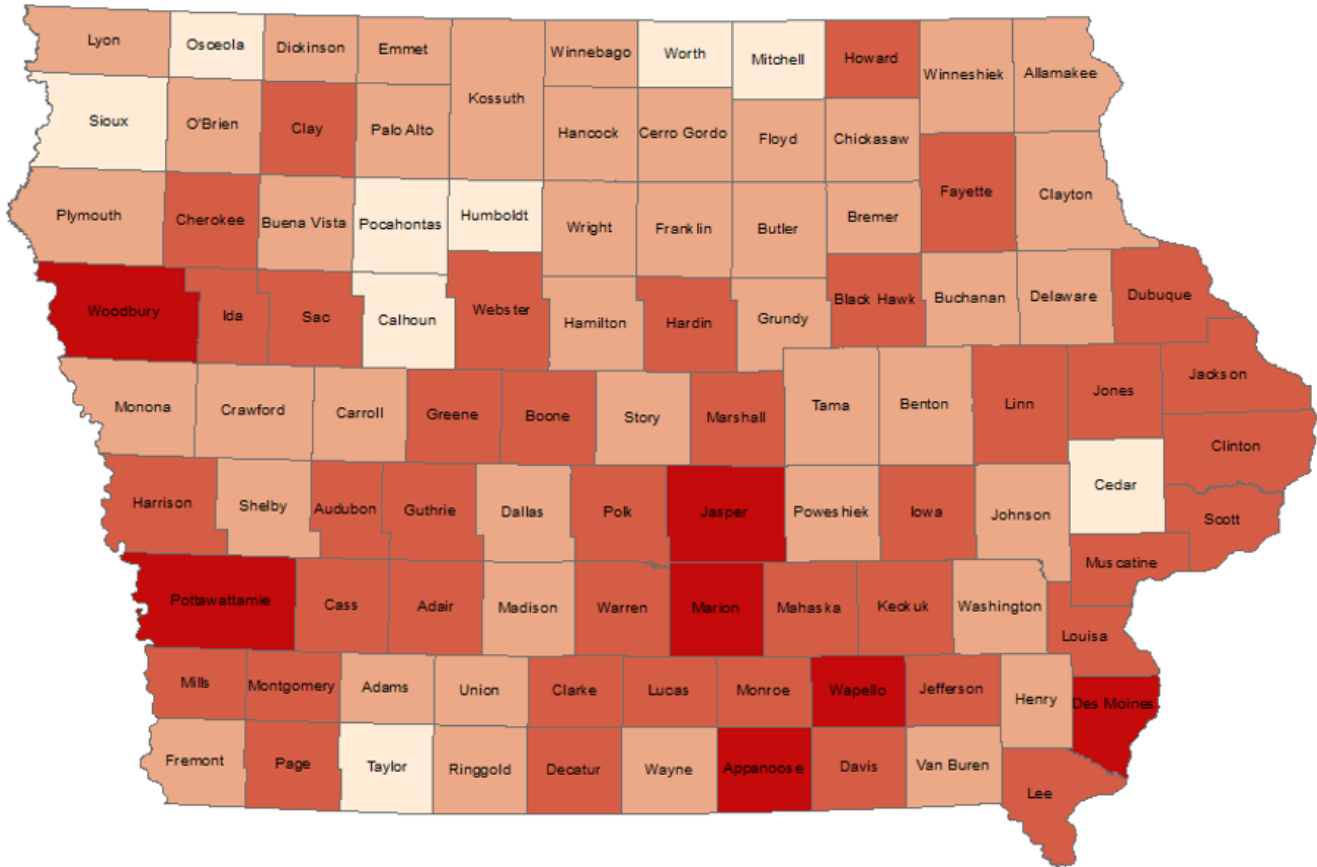
This map shows the rates of HCV per county of people diagnosed from January 1, 2000, through December 31, 2017. Rates were calculated based on counties where persons were living at the time of diagnosis.

Figure 3.10
Prevalence of HCV by County of Residence at Diagnosis: Iowans Diagnosed with HCV per 100,000 population as of December 31, 2017

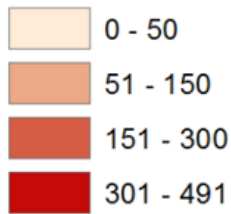


* Indicates one of the 10 most populous Iowa counties
 — County populations are based on the 2017 U.S. Census estimates

Figure 3.11
Rates of Chronic HCV in Iowans Under 40 Years Old per 100,000 Population
County of Residence at Diagnosis



HCV Rate Per 100,000 among Ages below 40 years



This map shows the rates of HCV per county of Iowans between 15 and 39 years old who were diagnosed with chronic HCV from January 1, 2000, through December 31, 2017. It indicates counties where persons were living at the time of diagnosis.

Because there are not many Iowans between 15 and 39 who live in Iowa counties with small population sizes, only rates are presented for the under 40 population in order to protect confidentiality.

Section 4: REPORTING HCV IN IOWA

All identified forms of viral hepatitis are reportable to the Iowa Department of Public Health (IDPH), as mandated by [Iowa Code section 139A.3](#). Due to the infectious nature of each form of viral hepatitis, it is necessary that every Iowan be reported so that prevention and control efforts may be initiated by IDPH.

What laboratory results should be reported?

1. Screening tests:
 - a. Anti-HCV: Positive or reactive
2. Confirmatory Testing:
 - a. HCV RNA, NAT, or PCR: Positive or reactive test results
 - b. HCV RNA, NAT, or PCR: Negative or not detected test results
 - c. Genotyping: Detected or not detected results

Both medical providers who make these diagnoses and laboratories who find positive results for hepatitis C are required to report. Many laboratories now have automated processes (e.g., Electronic Laboratory Reporting) to report their results. The technology for automated reporting from medical providers is not fully developed at this time.

The most common method of reporting by medical providers is by completing the form titled, "[Iowa Disease Reporting Card](#)" located at [this link](#). The form may be faxed in to the number located at the top of the form. For questions related (515) 281-5027.

See <http://idph.iowa.gov/hivstdhep/hep> for this report.

January 1, 2017, through December
31, 2017



Iowa Department of Public Health
Division of Behavioral Health
Bureau of HIV, STD, and Hepatitis

For assistance or questions regarding the 2017 HCV Surveillance Report, please contact:

Nicole Kolm-Valdivia, Ph.D., M.P.H.
Manager, Data Program
Phone: (515) 281-6974
Email: nicole.kolm-valdivia@idph.iowa.gov

Shane Scharer, M.S.
Hepatitis Data Coordinator
Phone: (515) 281-5027
Email: shane.scharer@idph.iowa.gov