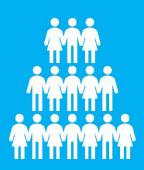




Communicable Disease Program
July 2019



In the United States During 2013-2016:



persons had a positive HCV 4.1 million antibody indicating past or current infection

M 2.4 million

persons were HCV RNA positive indicating current infection



In Chicago through 2017:

25,363

People were living with HCV From 2013 to 2017 there was a

268% in HCV cases among those born after 1986



Newly reported diagnoses in 2017

HCV diagnoses among women of childbearing age

DOUBLED since 2014

3,256

Had evidence of resolved infection



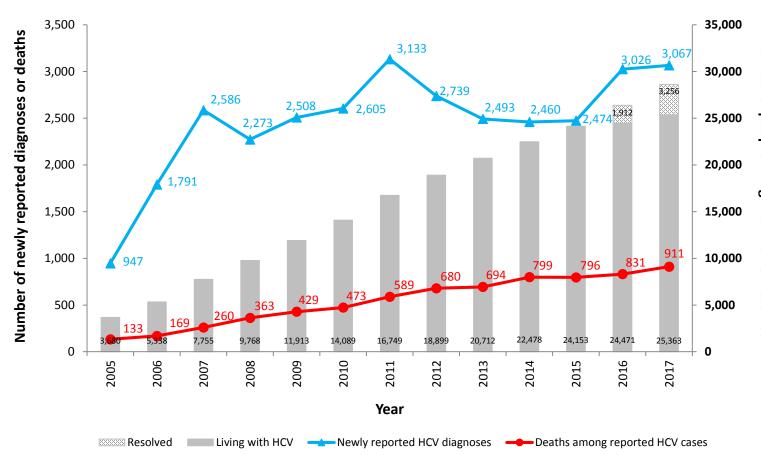
Deaths among reported HCV cases continued to increase

Introduction

To more accurately describe the hepatitis C epidemic, accounting for those that no longer have signs of current infection, in 2018 the Centers for Disease Control and Prevention (CDC) produced updated hepatitis C prevalence estimates among adults ≥18 years in the US. These estimates were derived from a variety of sources since not all jurisdictions are routinely able to conduct hepatitis C surveillance. During 2013-2016 approximately 4.1 million persons had a positive antibody for the hepatitis C virus (HCV), which can indicate past or current infection, and 2.4 million persons were HCV RNA positive indicating current infection¹. While prevalence estimates might have changed, there continues to be an increasing number of new infections in younger populations across the nation. Increases among women of childbearing age are particularly concerning due to the risk of vertical transmission and no available treatment for pregnant women or young children. HCV infection among women giving birth increased 89% from 1.8 to 3.4 per 1,000 live births in the US between 2009-2014².

Chicago continues to see high numbers of newly reported diagnoses with 3,067 in 2017 and a steady increase in deaths among those that have ever been diagnosed with HCV since 2005 (Figure 1). To inform elimination efforts, the Chicago Department of Public Health (CDPH) has begun to estimate the proportion of those no longer infected with HCV in Chicago. Currently such estimates can only be determined using laboratory data. For these estimates to be accurate it is important that people have follow-up RNA testing after a positive antibody screening result and after completing treatment. Based on negative RNA testing results, 3,256 out of 28,619 (11%) of those previously diagnosed with HCV had resolved their infection through 2017. Resolved infections can include those that have spontaneously cleared, successfully completed treatment or had a false positive antibody result. Additional information on testing practices and resolved infections can be found on pages 8-9 of this report.

Figure 1. People living with HCV, resolved, newly reported diagnoses and deaths among those with HCV, Chicago, 2005-2017



Notes on hepatitis C reporting:

2001 - HCV infection added to list of reportable conditions in Illinois

2005 - Change in case definition³

2005 - First laboratory in Illinois begins reporting HCV results electronically

2007 - INEDSS reporting begins

2010 - Change in case definition4

2011 - Change in case definition⁵

2012 - Change in case definition⁶

2013 - First direct acting agents available

2014 - HepCCATT Project established in Chicago

2016 - Change in case definition⁷

2016 - Consistent collection of negative lab results

HCV in Younger Populations

Newly reported diagnoses in younger populations can be an indication of active transmission. As seen in more recent years, "younger adults" (those born between 1975-1995) continued to form a smaller second peak in 2017 (Figure 2). Nationally, the highest rates of new infection are among those under 40 and largely attributable to the opioid crisis. Local hepatitis C surveillance data lack complete behavioral information, however recent analyses of data from the Cook County Medical Examiner's office show that opioid-related deaths occurring in Chicago continued to increase in 2017 with the highest percentage of deaths involving heroin and fentanyl.

More information on the opioid analysis can be found at: https://www.chicago.gov/content/dam/city/depts/cdph/CDPH/Healthy%20Chicago/ChicagoOpioidReport2018.pdf

Figure 2. Newly reported HCV diagnoses by year of birth, Chicago, 2017

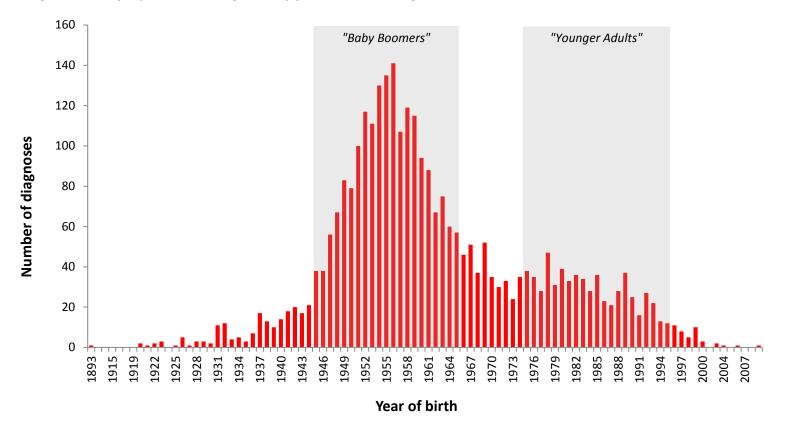
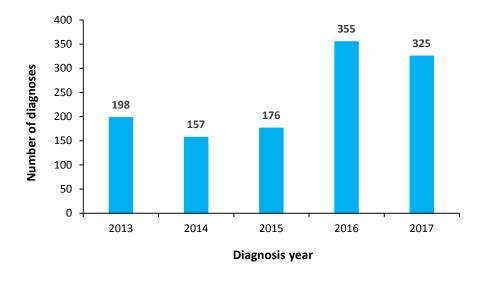


Figure 3. Newly reported HCV diagnoses in women of childbearing age (15-44) by year of diagnosis, Chicago, 2013-2017



- Nationally, there has been an increase in HCV infection among women giving birth²
- In Chicago, there was over a 100% increase in newly reported HCV diagnoses among women of childbearing age from 2015 to 2016 with the number remaining high for 2017 (Figure 3)
- Vertical transmission rates from HCV infected mothers to infants is estimated to be 6%¹⁰

Demographics

Table 1. Newly reported diagnoses, people living with HCV and resolved infections by selected demographic characteristics, Chicago, 2017

Demographic Characteristics	2	017 Diagnose	es	2017 Prevalence			Resolved	
	No.	%	Rate	No.	%	Rate	No.	%
Sex								
Male	1,796	58.6%	137.3	15,683	61.8%	1,198.9	1,861	57.2%
Female	1,271	41.4%	91.6	9,661	38.1%	696.3	1,392	42.8%
Unknown	0	0.0%		19	0.1%		<5	<1%
Race/Ethnicity								
AI/AN, NH	<5	<1%		69	0.3%		9	0.3%
Asian, NH	44	1.4%		296	1.2%		60	1.8%
Black, NH	1,066	34.8%		7,801	30.8%		969	29.8%
Hispanic	239	7.8%		1,760	6.9%		372	11.4%
Other, NH	63	2.1%		399	1.6%		50	1.5%
White, NH	385	12.6%		2,944	11.6%		423	13.0%
Unknown	1,266	41.3%		12,094	47.7%		1,373	42.2%
Age at Diagnosis								
<20	29	0.9%	4.1	171	0.7%	24.5	44	1.4%
20-29	204	6.7%	40.9	1,262	5.0%	252.8	211	6.5%
30-39	331	10.8%	75.2	2,828	11.2%	642.8	325	10.0%
40-49	355	11.6%	101.6	5,306	20.9%	1,518.2	602	18.5%
50-59	804	26.2%	258.1	9,123	36.0%	2,928.9	1,202	36.9%
60-69	1,043	34.0%	513.0	5,121	20.2%	2,518.8	730	22.4%
70+	301	9.8%	156.1	1,552	6.1%	804.7	142	4.4%
Birth Cohort								
Pre 1945	196	6.4%	129.6	2,410	9.5%	1,594.1	147	4.5%
1945-1965	1,877	61.2%	385.3	17,148	67.6%	3,519.8	2,176	66.8%
1966-1986	751	24.5%	93.5	5,091	20.1%	633.8	723	22.2%
Post 1986	243	7.9%	19.4	714	2.8%	57.0	210	6.4%
Total	3,067		113.8	25,363		940.9	3,256	

- Males make up a higher proportion of people living with HCV (61.8%) and those with recent diagnoses (58.6%)
- Among reported cases where race/ethnicity is known, NH Blacks make up a higher proportion of those with HCV than other race/ethnicity groups for newer diagnoses and among those living with HCV, respectively, (59.2%, 58.8%) followed by NH Whites (21.4%, 22.2%) and Hispanics (13.3%, 13.3%)
- Newly reported diagnoses were highest (34%) among people between the ages of 60-69 years in 2017
- 67.6% of people living with HCV through 2017 were born between 1945 and 1965
- The rate of newly reported HCV diagnoses in Chicago for 2017 was 113.8 cases per 100,000 population. This is 4 times the rate of new HIV diagnoses in Chicago, which was 27.9 cases per 100,000 population in 2017¹¹
- With less than 3% of reported cases containing information about the potential source(s) of infection (i.e. history of injection drug use) we are unable to describe trends in HCV transmission

Notes: Groups might not total 100% due to rounding; Use caution when interpreting data based on less than 20 events (rate/percent is unreliable); HCV prevalence represent people diagnosed with HCV through 2017, living in 2017 and those without evidence of resolved infection through 2017; Resolved cases can include those that have spontaneously cleared, successfully completed treatment or had a false antibody result; Sex and age are at onset; Rate per 100,000 population using 2010 U.S. Census Bureau population figures; Rates were not calculated for race/ethnicity due to the high proportion of unknowns

Demographic Trends Over Time

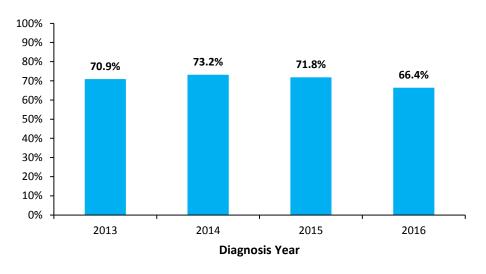
Table 2. Newly reported HCV cases by year of diagnosis and selected demographic characteristics, Chicago, 2013-2017 **Year of Diagnosis** Demographic **EAPC** 2013 2014 2015 2016 2017 Characteristics % % % No. % No. No. No. % No. Sex Male 1,578 63.3% 1.579 64.2% 1.557 62.9% 1.788 59.1% 1,796 58.6% 3.8 Female 913 36.6% 881 35.8% 916 37.0% 1237 40.9% 1,271 41.4% 10.0 Unknown <5 0 0.0% <5 <5 <1% 0 0.0% <1% <1% Race/Ethnicity AI/AN, NH <5 <1% <5 <1% 0.2% <5 <1% <5 <1% 6 25 29 43 44 Asian, NH 1.0% 1.2% 27 1.1% 1.4% 1 4% 15.2 Black, NH 904 36.3% 800 32.5% 819 33.1% 1,005 33.2% 1,066 34.8% 5.6 8.9% 7.2% 193 7.8% 284 239 7.8% 221 178 9.4% 6.2 Hispanic Other, NH 41 1.6% 38 1.5% 28 1.1% 76 2.5% 63 2.1% 15.5 12.9% 385 White, NH 323 13.0% 318 352 14.2% 378 12.5% 12.6% 5.2 977 39.2% 1,094 44.5% 1,049 1,266 41.3% Unknown 42.4% 1,236 40.8% Age at Diagnosis <20 15 0.6% <5 <1% 8 0.3% 26 0.9% 29 0.9% 31.9 20-29 110 4.4% 96 3.9% 114 4.6% 233 7.7% 204 6.7% 21.2 30-39 216 8.7% 201 8.2% 219 8.9% 366 12.1% 331 10.8% 14.5 40-49 387 15.5% 334 13.6% 310 12.5% 370 12.2% 355 11.6% -0.7 50-59 994 39.9% 914 37.2% 835 855 28.3% 804 26.2% -4.9 33.8% 60-69 599 24.0% 702 28.5% 771 31.2% 890 29.4% 1,043 34.0% 13.5 70+ 172 6.9% 209 8.5% 217 8.8% 286 9.5% 301 9.8% 14.3 Birth Cohort Pre 1945 214 8.6% 219 8.9% 203 8.2% 225 7.4% 196 6.4% -1.51945-1965 1,691 67.8% 1,665 67.7% 1,640 66.3% 1,771 58.5% 1,877 61.2% 2.7 505 786 751 1966-1986 522 20.9% 20.5% 540 21.8% 26.0% 24.5% 11.7 Post 1986 66 2.6% 71 2.9% 91 3.7% 244 8.1% 243 7.9% 38.4 2,493 2,460 2,474 3,026 3,067 Total 6.2

- While males make up a higher proportion of those living with HCV, females have increased from 36.6% in 2013 to 41.4% in 2017 with an EAPC of 10% over the last 5 years
- Removing cases with unknown race/ethnicity from the analysis, NH Blacks continue to have the highest proportion of reported cases, ranging from 59.6% in 2013 to 56.1% in 2016
- Looking at age at time of first case report, persons aged 50-69 years make up more than half of reported cases during the past five years. Likewise, in the birth cohort persons born during 1945-1965 ("baby boomers") comprise the largest number of reported cases.
- Diagnoses have increased among those 60 years old and over in recent years from 30.9% in 2013 to 43.8% in 2017. These increases might be attributable to national and local testing campaigns targeting "baby boomers."
- Those born after 1986 have the biggest EAPC (38.4%) for newly reported diagnoses between 2013-2017. The increased reports among younger populations might represent recent or ongoing transmission.

Notes: Groups might not total 100% due to rounding; Use caution when interpreting data based on less than 20 events (percent is unreliable); Sex and age are at onset; Estimated Annual Percent Change (EAPC) is a statistical method used to provide a general picture of disease trends across the 5 years of the report. EAPC assumes a constant rate of change and should not be over-interpreted.

Confirmatory Testing

Figure 4. Newly reported HCV diagnoses with a positive RNA or genotype result, Chicago, 2013-2016



Notes: Diagnoses after 2016 are not included to allow at least 12 months for follow-up after the initial diagnosis; RNA and genotype testing can be in the diagnosis year or after; RNA and genotype tests performed after 2017 are not included; all RNA and genotype tests included regardless of result; Unable to systematically to account for out migration or deaths occurring outside of Illinois; Negative RNA tests were not consistently collected until 2016

- While programs and campaigns for increased screening have existed for several years, confirmatory testing rates have not increased (Figure 4)
- Additional testing after a positive screening result is needed to determine current infection status and treatment success
- Reflex testing is recommended and removes the need for the patient to return for follow-up testing to confirm infection^{12,13}

Figure 5. Genotype testing among those with a positive RNA test through 2017, Chicago

- Genotype testing is used to determine which hepatitis C treatment is appropriate for those with confirmed infection
- Approximately 14,500 people in Chicago have had a positive RNA test
- Genotype testing has been performed on half of people that have ever had a positive RNA test

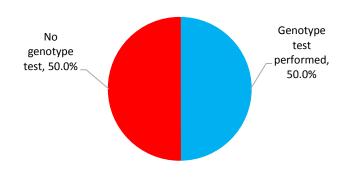
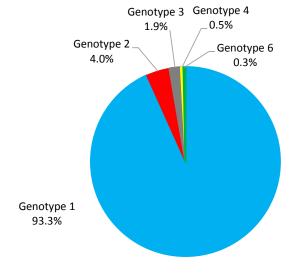


Figure 6. Distribution of genotypes among those with a positive RNA test through 2017, Chicago

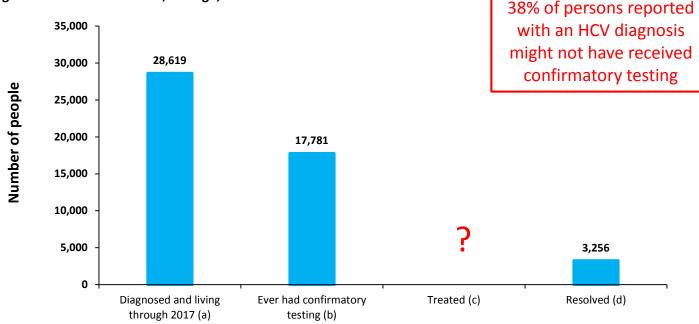


- Genotype 1 is the most common in the United States^{14,15}
- Of the 6,281 individuals diagnosed in Chicago with genotype results available, 93.3% were genotype 1
- Some treatments might only work with certain genotypes. For recommendations please visit: https://www.hcvguidelines.org/

Notes: Some genotype results might be missing due to incorrect variable mapping during ELR imports into INEDSS

Continuum of Care

Figure 7. Continuum of Care, Chicago, 2017



- (a) Number of persons ever reported with an HCV diagnosis through 2017 meeting case definition at the time of report regardless of current infection status and living in 2017
- (b) Number of persons that have ever had at least 1 confirmatory test (RNA or genotype) regardless of the result among those meeting the criteria in (a). RNA tests might be the result of reflex testing.
- (c) While laboratory data can provide some clues as to who might have been evaluated for, started or completed treatment, pharmacy data is needed to accurately determine those on treatment versus those naturally clearing the infection. These data are not currently available on all people reported with HCV in Chicago.
- (d) Number of persons that have had at least 1 negative RNA test with the most recent RNA test being negative or have had at least 1 negative RNA test without ever having a positive RNA test for those meeting the criteria in (a). This can include those who were treated, spontaneously cleared or had a false positive antibody result. To account for variation in RNA testing reference ranges by laboratories and over time results with a low viral load (<1000 IU/ml) are considered a negative RNA test. This cutoff, though empirically determined, might result in the misclassification of a small number of unresolved cases into the resolved category.</p>

Notes: Unable to systematically to account for out migration or deaths occurring outside of Illinois; individuals might have been treated before negative RNA tests were consistently collected in 2016; Medicaid restrictions for treatment in Illinois existed until the end of 2018; Some laboratory tests and/or results might not have been reported since ELR was not widely available until 2010

Geography

- All Chicago community areas had people living with hepatitis C and newly diagnosed cases in 2017
- Community areas with the highest rates of people living with hepatitis C (Map 1):
 - <u>Southside</u> Fuller Park, Washington Park, Grand Boulevard, Oakland, Englewood, Douglas, Woodlawn, Greater Grand Crossing, West Englewood, South Shore, Chatham, Auburn Gresham, Roseland, Avalon Park, Kenwood, South Deering, Washington Heights, South Chicago, Calumet Heights, Burnside, New City, Pullman
 - Westside East Garfield Park, West Garfield Park, Near West Side, North Lawndale, Austin, Humboldt Park
 - Northside Uptown, Rogers Park
- Community areas with the highest rates of people recently diagnosed with hepatitis C (Map 2):
 - Southside Fuller Park, Douglas, Grand Boulevard, Washington Park, Woodlawn, Greater Grand Crossing, Englewood, South Shore, Oakland, West Englewood, Chatham, Avalon Park, Burnside
 - Westside Near West Side, East Garfield Park, West Garfield Park, North Lawndale
- These same community areas are often highlighted in Healthy Chicago 2.0 as neighborhoods with higher rates of economic hardship, unemployment, blood lead levels among children, infant mortality, sexually transmitted infections and firearm-related homicides as well as with lower rates for child opportunity, high school graduation and life expectancy¹⁶

Map 1. Rate of people living with hepatitis C by community area, Chicago, 2017

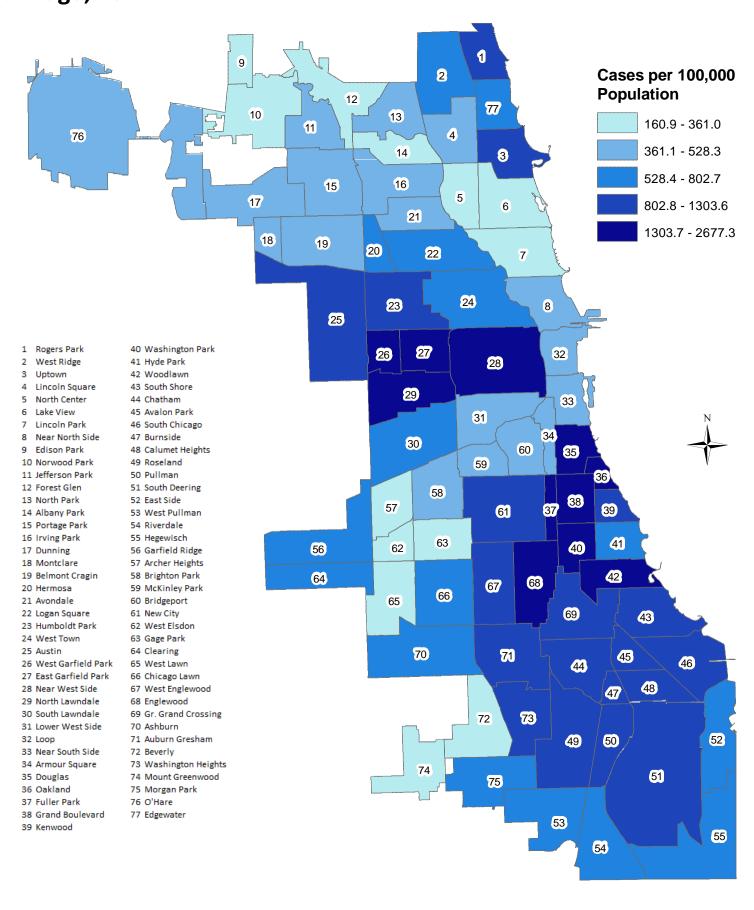


Table 3. People living with hepatitis C (prevalence) in 2017 by community area, Chicago

Comm	nunity Area	COUNT	RATE†	Commi	ınity Area	COUNT	RATE†
1	Rogers Park	522	949.2	40	Washington Park	183	1,561.8
2	West Ridge	399	554.6	41	Hyde Park	140	545.2
3	Uptown	621	1,101.8	42	Woodlawn	322	1,356.4
4	Lincoln Square	179	453.2	43	South Shore	624	1,199.8
5	North Center	82	257.3	44	Chatham	367	1,182.8
6	Lake View	328	347.6	45	Avalon Park	103	1,011.3
7	Lincoln Park	231	360.3	46	South Chicago	295	945.6
8	Near North Side	335	416.2	47	Burnside	27	925.9
9	Edison Park	18	160.9	48	Calumet Heights	130	941.2
10	Norwood Park	111	299.8	49	Roseland	453	1,015.3
11	Jefferson Park	101	396.9	50	Pullman	62	846.4
12	Forest Glen	51	275.6	51	South Deering	148	979.5
13	North Park	72	401.5	52	East Side	125	542.5
14	Albany Park	184	357.0	53	West Pullman	238	802.7
15	Portage Park	331	516.2	54	Riverdale	45	694.2
16	Irving Park	263	492.9	55	Hegewisch	72	763.8
17	Dunning	188	448.3	56	Garfield Ridge	186	538.9
18	Montclare	59	439.4	57	Archer Heights	29	216.5
19	Belmont Cragin	331	420.4	58	Brighton Park	177	390.1
20	Hermosa	142	567.8	59	McKinley Park	68	435.6
21	Avondale	171	435.5	60	Bridgeport	126	394.0
22	Logan Square	420	577.0	61	New City	385	867.6
23	Humboldt Park	625	1,109.7	62	West Elsdon	58	320.3
24	West Town	469	570.3	63	Gage Park	144	361.0
25	Austin	1,178	1,195.8	64	Clearing	144	622.3
26	West Garfield Park	275	1,527.7	65	West Lawn	73	218.9
27	East Garfield Park	348	1,692.0	66	Chicago Lawn	406	729.8
28	Near West Side	778	1,417.6	67	West Englewood	454	1,278.7
29	North Lawndale	476	1,325.5	68	Englewood	427	1,393.0
30	South Lawndale	434	547.4	69	Gr. Grand Crossing	425	1,303.6
31	Lower West Side	177	494.8	70	Ashburn	227	552.6
32	Loop	118	403.0	71	Auburn Gresham	521	1,068.9
33	Near South Side	113	528.3	72	Beverly	65	324.4
34	Armour Square	61	455.5	73	Washington Heights	256	966.3
35	Douglas	253	1,387.2	74	Mount Greenwood	57	298.5
36	Oakland	88	1,487.0	75	Morgan Park	142	629.9
37	Fuller Park	77	2,677.3	76	O'Hare	55	431.2
38	Grand Boulevard	339	1,545.9	77	Edgewater	432	764.3
39	Kenwood	179	1,003.3		Unknown CA	6,045	
					Chicago Total	25,363	940.9

Notes: †Rate per 100,000 population using 2010 US Census Bureau population figures; Use caution when interpreting data based on less than 20 events, rate is unreliable; Resolved infections are not included

Map 2. Rate of newly reported hepatitis C diagnoses in 2017 by community area, Chicago

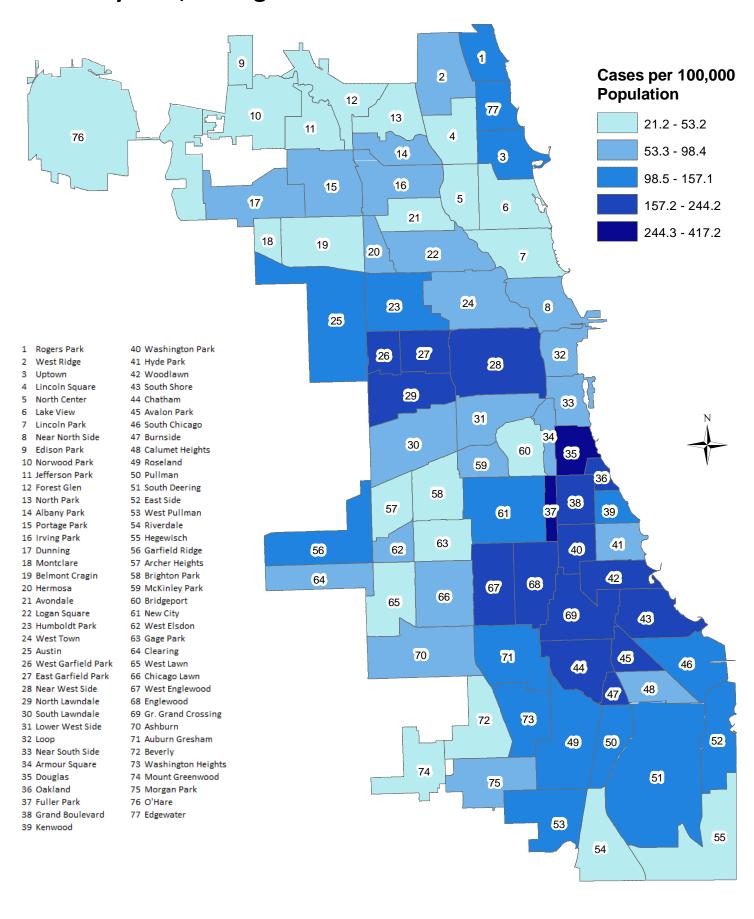


Table 4. Newly reported hepatitis C diagnoses in 2017 by community area, Chicago

Community Area		COUNT	RATE†	Community Area	COUNT	RATE†
1	Rogers Park	57	103.7	40 Washington Park	26	221.9
2	West Ridge	44	61.2	41 Hyde Park	19	74.0
3	Uptown	72	127.7	42 Woodlawn	50	210.6
4	Lincoln Square	18	45.6	43 South Shore	101	194.2
5	North Center	8	25.1	44 Chatham	57	183.7
6	Lake View	43	45.6	45 Avalon Park	18	176.7
7	Lincoln Park	23	35.9	46 South Chicago	49	157.1
8	Near North Side	49	60.9	47 Burnside	5	171.5
9	Edison Park	<5	26.8	48 Calumet Heights	11	79.6
10	Norwood Park	15	40.5	49 Roseland	61	136.7
11	Jefferson Park	12	47.2	50 Pullman	9	122.9
12	Forest Glen	6	32.4	51 South Deering	20	132.4
13	North Park	6	33.5	52 East Side	25	108.5
14	Albany Park	30	58.2	53 West Pullman	31	104.5
15	Portage Park	39	60.8	54 Riverdale	<5	46.3
16	Irving Park	31	58.1	55 Hegewisch	<5	21.2
17	Dunning	24	57.2	56 Garfield Ridge	41	118.8
18	Montclare	6	44.7	57 Archer Heights	6	44.8
19	Belmont Cragin	41	52.1	58 Brighton Park	19	41.9
20	Hermosa	18	72.0	59 McKinley Park	9	57.6
21	Avondale	18	45.8	60 Bridgeport	17	53.2
22	Logan Square	42	57.7	61 New City	66	148.7
23	Humboldt Park	81	143.8	62 West Elsdon	14	77.3
24	West Town	56	68.1	63 Gage Park	18	45.1
25	Austin	138	140.1	64 Clearing	22	95.1
26	West Garfield Park	36	200.0	65 West Lawn	11	33.0
27	East Garfield Park	42	204.2	66 Chicago Lawn	50	89.9
28	Near West Side	134	244.2	67 West Englewood	66	185.9
29	North Lawndale	66	183.8	68 Englewood	60	195.7
30	South Lawndale	78	98.4	69 Gr. Grand Crossing	64	196.3
31	Lower West Side	27	75.5	70 Ashburn	26	63.3
32	Loop	25	85.4	71 Auburn Gresham	75	153.9
33	Near South Side	15	70.1	72 Beverly	9	44.9
34	Armour Square	11	82.1	73 Washington Heights	38	143.4
35	Douglas	54	296.1	74 Mount Greenwood	7	36.7
36	Oakland	11	185.9	75 Morgan Park	22	97.6
37	Fuller Park	12	417.2	76 O'Hare	6	47.0
38	Grand Boulevard	51	232.6	77 Edgewater	58	102.6
39	Kenwood	23	128.9	Unknown CA	411	
				Chicago Total	3,067	113.8

Notes: †Rate per 100,000 population using 2010 US Census Bureau population figures; Use caution when interpreting data based on less than 20 events, rate is unreliable

List of Contributors

Alexandra Gagner, Tristan McPherson, Sarah Kemble, Stephanie Black, Peter Ruestow, Deanna Fleary, Kathleen Ritger, Allison Arwady

Suggestion Citation

Chicago Department of Public Health. Hepatitis C Surveillance Report 2017. Chicago, IL: City of Chicago, July 2019.

List of Acronyms

AI/AN = American Indian/Alaskan Native

CDC = Centers for Disease Control and Prevention

CDPH = Chicago Department of Public Health

EAPC = Estimated Annual Percent Change

ELR = Electronic Laboratory Reporting

HCV = Hepatitis C Virus

HepCCATT = Hepatitis C Community Alliance to Test and Treat (http://hepccatt.org/)

HIV = Human Immunodeficiency Virus

IDPH = Illinois Department of Public Health

INEDSS = Illinois National Electronic Disease Surveillance System

NH = Non-Hispanic

RNA = Ribonucleic Acid

Technical Notes

This report represents data collected in the Illinois National Electronic Disease Surveillance System (INEDSS) for Chicago residents or if address is unknown, for patients tested by a Chicago provider. Hepatitis C was added to the Illinois list of reportable conditions in 2001. One major commercial laboratory began electronic lab reporting (ELR) in 2005 with many other labs onboarded after 2010. Currently, all major commercial reference labs and most large hospital labs in the region report results electronically. However, in ELR demographic and behavioral risk information are often missing or incomplete. Fluctuations in the number of reported cases might be the result of increases in ELR, changes in the case definition, varying levels of funding to support HCV surveillance activities over the years, changes in HCV testing practices and/or campaigns promoting testing. This surveillance report is not representative of all persons with HCV in Chicago because not all have been diagnosed and those seen at Veteran's Administration medical centers are not reported to the health department.

Excluded from the data

- · Reports without proper patient names (i.e. numbers, codes or blank name fields)
- Duplicate reports
- Reports without a date of birth or under the age of 2 at diagnosis

Included in the data

- Confirmed or probable cases (based on the case definition at the time of report)
- Acute or chronic cases (based on the case definition at the time of report)
- Cases with a Chicago address or cases with an unknown address and the reporting facility was located in Chicago at the time
 of report
- Resolved or cured infections
- New cases reflect diagnoses not previously reported to the health department and might not represent recent transmission

Data sources for this report

- INEDSS HCV case reports (2007-present, also includes some pre-2007 legacy data) as of 2/12/2019
- CDPH viral hepatitis database (approximately 2001-2012)
- Vital records (Illinois 2008-2017, Chicago 1990-2017)
- US Census Bureau

Geocoding and mapping

- The City of Chicago GIS bulk geocoder is used to obtain the community area for address at onset and current address for each reported case
- Addresses might not be geo-coded if they are missing, include incorrect street names or direction, have incompatible formatting or are outside of the City of Chicago
- Some addresses might represent the testing or reporting facility instead of the patient's address at diagnosis

Reporting

Hepatitis C is a reportable condition under the Control of Communicable Disease Code of Illinois, Title 77, Chapter I, Subpart C, Section 690.200 and Subpart D, Section 690.452. The full Control of Communicable Disease Code of Illinois can be found by using the following link: http://www.ilga.gov/commission/jcar/admincode/077/07700690sections.html

Disease reports can be faxed to the Chicago Department of Public Heath (CDPH) at 312.746.6388 or submitted electronically using the Illinois National Electronic Disease Surveillance System (INEDSS) which can be accessed through the Illinois Department of Public Health (IDPH) web portal (http://portalhome.dph.illinois.gov/).

While laboratories send details on the tests and results to IDPH electronically they do not usually send demographics, clinical, behavioral and treatment history or symptom information. Reporting these details to the health department is the responsibility of the provider or provider's office. This information is critical in identifying acute cases that could be linked to outbreaks and getting the complete picture of the epidemic to target prevention and treatment efforts.

For questions about provider reporting please contact Saul Ayala at 312.746.6197 or saul.ayala@cityofchicago.org.

Please do not leave patient information on voicemails or send in emails

References

- ¹ Hofmesiter MG, Rosenthal EM, Barker LK, Rosenberg ES, Barranco MA, Hall EW, Edlin BR, Mermin J, Ward JW, Ryerson AB. Estimating prevalence of hepatitis C Virus Infection in the United States, 2013-2016. Hepatology. 2018:XX(X):pp-pp.
- ² Patrick SW, Bauer AM, Warren MD, Jones TF, Wester C. Hepatitis C Virus Infection Among Women Giving Birth Tennessee and United States, 2009–2014. MMWR Morb Mortal Wkly Rep 2017;66:470–473.
- ³ Centers for Disease Control and Prevention. Hepatitis C, Chronic 2005 Case Definition. Accessed February 12, 2019. (https://wwwn.cdc.gov/nndss/conditions/hepatitis-c-chronic/case-definition/2005/)
- ⁴ Centers for Disease Control and Prevention. Hepatitis C, Chronic 2010 Case Definition. Accessed February 12, 2019. (https://wwwn.cdc.gov/nndss/conditions/hepatitis-c-chronic/case-definition/2010/)
- ⁵ Centers for Disease Control and Prevention. Hepatitis C, Chronic 2011 Case Definition. Accessed February 12, 2019. (https://wwwn.cdc.gov/nndss/conditions/hepatitis-c-chronic/case-definition/2011/)
- ⁶ Centers for Disease Control and Prevention. Hepatitis C, Chronic 2012 Case Definition. Accessed February 12, 2019. (https://wwwn.cdc.gov/nndss/conditions/hepatitis-c-chronic/case-definition/2012/)
- ⁷ Centers for Disease Control and Prevention. Hepatitis C, Chronic 2016 Case Definition. Accessed February 12, 2019. (https://wwwn.cdc.gov/nndss/conditions/hepatitis-c-chronic/case-definition/2016/)
- ⁸ Centers for Disease Control and Prevention. CDC Estimates Nearly 2.4 Million Americans Living with Hepatitis C. Press release November 6, 2018. (https://www.cdc.gov/nchhstp/newsroom/2018/hepatitis-c-prevalence-estimates-press-release.html)
- ⁹ Tamara Rushovich, Allison Arwady, Elizabeth Salisbury-Afshar, Ponni Arunkumar, Mark Kiely, Steven Aks, Nikhil Prachand. Annual Opioid Surveillance Report Chicago 2017. City of Chicago, October 2018.
- (https://www.chicago.gov/content/dam/city/depts/cdph/CDPH/Healthy%20Chicago/ChicagoOpioidReport2018.pdf)
- ¹⁰Benova L, Mohamoud YA, Calvert C, Abu-Raddad LJ. Vertical transmission of hepatitis C virus: systematic review and meta-analysis. Clin Infect Dis 2014;59:765–73.
- ¹¹Chicago Department of Public Health. HIV/STI Surveillance Report 2018. Chicago, IL: City of Chicago, December 2018.

(https://www.chicago.gov/content/dam/city/depts/cdph/infectious_disease/STI_HIV_AIDS/HIVSTI_SURVEILLANCE_REPORT_2018_1 272018.pdf)

¹²Centers for Disease Control and Prevention. Vital Signs: Evaluation of Hepatitis C Virus Infection Testing and Reporting – Eight U.S. Sites, 2005-2011. MMWR: May 10, 2013, Vol. 62, No. 18.

(https://www.cdc.gov/mmwr/preview/mmwrhtml/mm6218a4.htm?s cid=mm6218a4 w)

- ¹³Centers for Disease Control and Prevention. Testing for HCV Infection: An Update of Guidance for Clinicians and Laboratorians. MMWR: May 10, 2013, Vol. 62, No. 18. (https://www.cdc.gov/mmwr/preview/mmwrhtml/mm6218a5.htm)
- ¹⁴Manos MM, Shvachko VA, Murphy RC, Arduino JM, Shire NJ. Distribution of hepatitis C virus genotypes in a diverse US integrated health care population. J Med Virol. 2012;84(11):1744-50.
- ¹⁵Nainan OV, Alter, MJ, Kruszon-Moran D, Gao FX, Xia G, McQuillan G Margolis HS. Hepatitis C virus genotypes and viral concentrations in participants of a general population survey in the United States. Gastroenterology. 2006;131(2):478–84.
- ¹⁶ Dirksen JC, Prachand NG, et al. Healthy Chicago 2.0: Partnering to Improve Health Equity. City of Chicago, March 2016. (https://www.cityofchicago.org/content/dam/city/depts/cdph/CDPH/HC2.0Plan 3252016.pdf)

For questions on information presented in this report please email: alexandra.gagner@cityofchicago.org