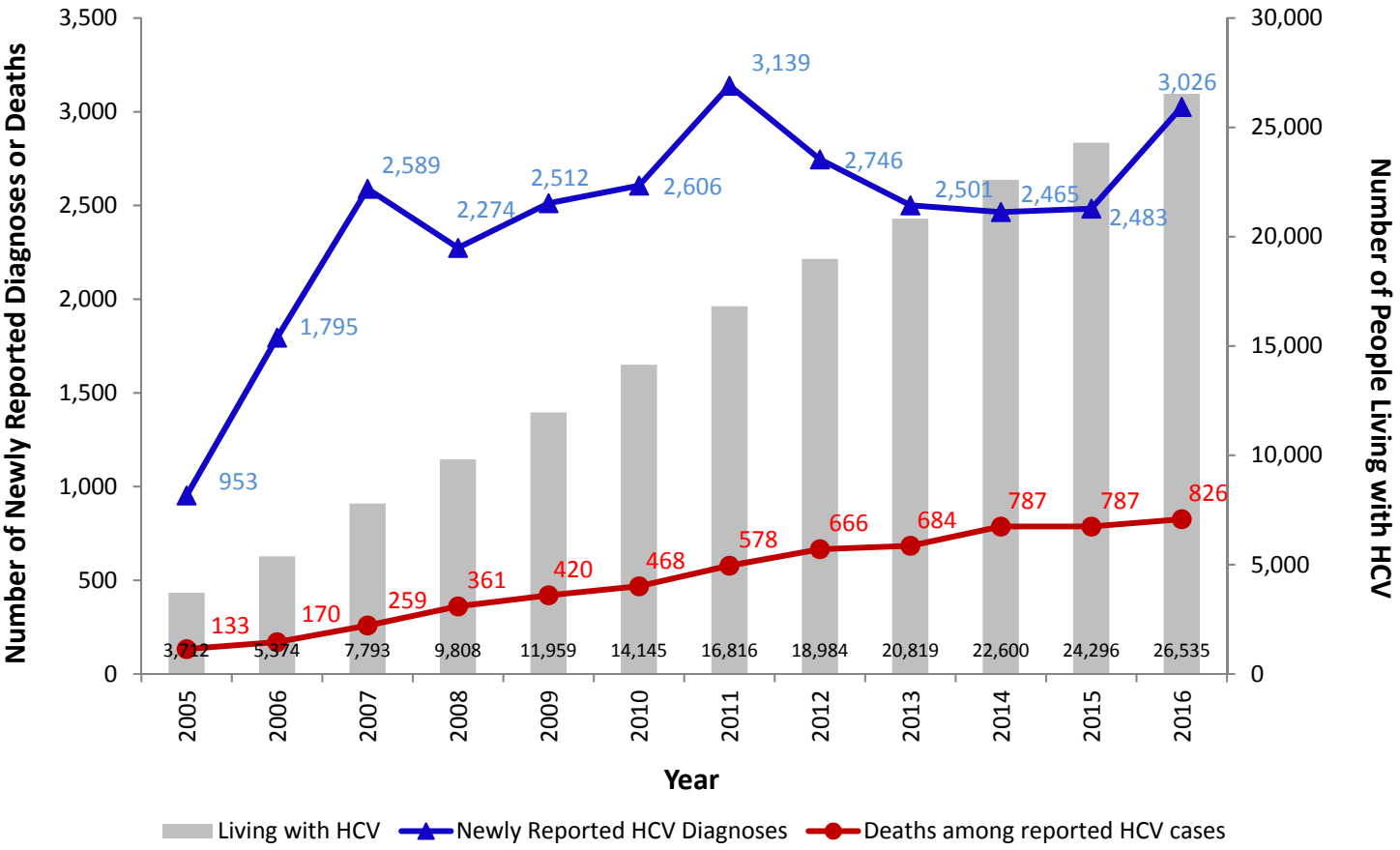
Hepatitis C Surveillance Report– Chicago, 2016

Published July 2018

Nationally, it is estimated that 3.5 million people are infected with the hepatitis C virus (HCV) and that roughly half of these people are unware of their status[1,2]. The number of acute or new infections has been increasing in recent years but many still go unreported because patients don't have symptoms or symptoms are not reported to the health department. While 2,967 acute cases were reported to the Centers for Disease Control and Prevention (CDC) in 2016, it is estimated that 41,200 new infections actually occurred[3]. Mortality associated with hepatitis C has been on the rise and since 2013 HCV associated deaths exceeded the number of deaths from 60 other infectious diseases combined (including HIV) in the United States[4]. In 2016 there were just over 9,000 cases of hepatitis C reported in Illinois[5]. Chicago cases represent approximately 30% of reported cases in Illinois annually[6].

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 onboarding after 2010. Currently all major commercial reference labs and most large hospital labs in the region report results electronically. However, in ELR demographic and behavior risk information are often missing or incomplete. Fluctuations in the number of cases may 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.

Figure 1. People Living with HCV, Newly Reported HCV Diagnoses and Deaths Among those with HCV, Chicago, 2005-2016



Notes on hepatitis C reporting:

2001 - HCV infection added to list of reportable conditions in Illinois
2005 - Change in case definition[7]
2005 - First laboratory in Illinois begins reporting HCV results electronically
2007 - INEDSS reporting begins
2010 - Change in case definition[8]
2011 - Change in case definition[9]
2012 - Change in case definition[10]
2013 - First direct acting agents available
2014 - HepCCATT Project established in Chicago
2016 - Change in case definition[11]

Data Summary

National

- An estimated 3.5 million people in the United States are infected with hepatitis C[1]
- Roughly half of those infected are unware of their status[2]
- **HCV associated deaths exceeded the number of deaths from 60 other infectious diseases combined (including HIV) in the United States[4]**

City

- 26,535 or approximately 1 in 100 people were living with HCV in Chicago through 2016 (Figure 1)
- There were 3,026 newly reported diagnoses (Figure 1) compared to 839 new HIV diagnoses in 2016[17]
- **All Chicago community areas had people living with hepatitis C and newly diagnosed cases in 2016**

Mortality

- In Chicago, deaths among all reported HCV cases have steadily increased since 2005 (Figure 1)
- 21.7% of all reported cases are known to be deceased through 2016
- **Between 2010-2014 almost 3,200 deaths among people reported with hepatitis C occurred (Figure 1). Chicago vital records data show that only 412 death certificates had HCV listed as a cause of death during the same timeframe consistent with underreporting of HCV on death certificates seen Nationally.**

Demographics

- Males make up a higher proportion of people living with HCV (61.6%) and those with recent diagnoses (59%) (Table 1)
- For more recent diagnoses, the proportion of females has increased from 36.5% in 2012 to 40.6% in 2016 (Table 2)
- Among cases where race is known, Non-Hispanic (NH) Blacks have a higher proportion of HCV than other race/ethnicity groups for new diagnoses (56%) and those living with HCV (56.8%) (Table 1)
- **People born after 1986 had the largest increase in new diagnoses between 2012-2016 with an estimated annual percent change (EAPC) of 36.6% (Table 2)**
- 68.6% of people living with HCV through 2016 were born between 1945 and 1965 (Table 1)
- Targeted testing campaigns have contributed to an increase in diagnoses among those 60 years old and over from 29.9% in 2012 to 38.9% in 2016 (Table 2)

Reporting

- Less than 2% of all reported cases have documentation of symptoms, elevated liver function tests or a prior negative test to confirm recent infection
- **Reporting of demographics, clinical symptom information, behavioral and treatment history by the provider is critical in identifying acute cases that could be linked to outbreaks and understanding the complete picture of the epidemic for targeted prevention and treatment efforts**

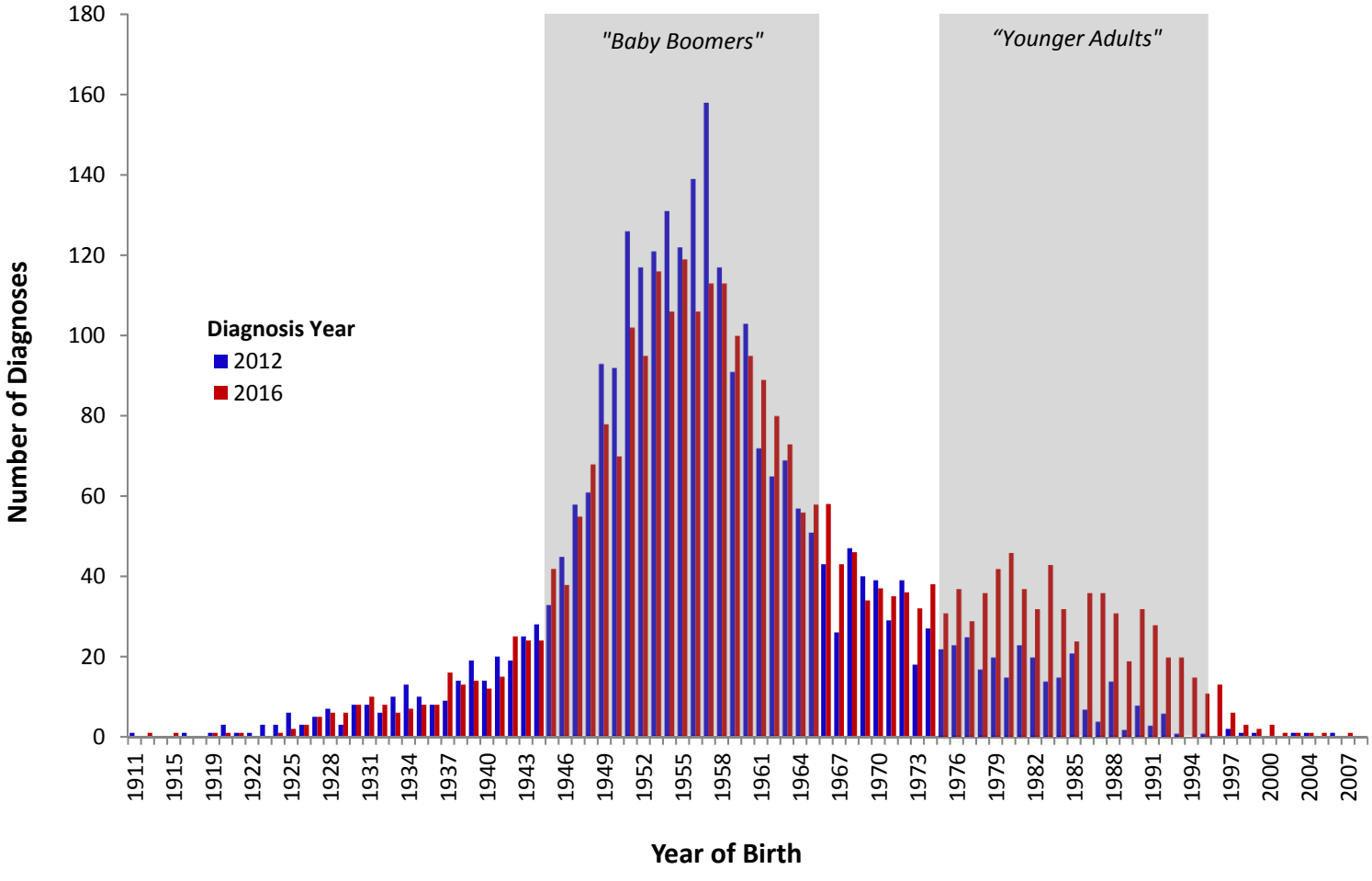
A Tale of 2 Epidemics

Historically, those born between 1945-1965 (*"baby boomers"*) have had the highest rate of hepatitis C. Many people born during this timeframe are believed to have become infected with hepatitis C between the 1960s-1980s through medical equipment or procedures before universal precautions and infection control procedures were in place or through contaminated blood and blood products prior to widespread screening. Even if only once, the sharing of equipment used to inject drugs could have also contributed to the spread of HCV in this population[12]. Since most people do not know they are infected and may not have symptoms, the CDC recommends one-time hepatitis C testing for everyone born between 1945-1965. Figure 2 below shows a peak in the number of hepatitis C diagnoses among those born during the "baby boomers" timeframe. More baby boomers were newly diagnosed in 2012 than in 2016.

In contrast, newly reported diagnoses among "younger adults" born between 1975-1995 have increased and a smaller second peak is seen in 2016. While there is not a well defined peak like with the "baby boomers" the difference between 2012 and 2016 diagnoses amongst younger age groups is noticeable. This trend has been well documented in other parts of the country and linked to the opioid epidemic[13]. Local hepatitis C surveillance data lack complete behavioral information but recent analyses of opioid-related overdose death data in Chicago show a 74% increase in overdose deaths involving opioids from 2015 to 2016 with the highest percentage of deaths involving heroin and fentanyl[14]. Active HCV transmission is likely occurring among these populations and identifying appropriate interventions is necessary.

More information on the opioid analysis can be found at:
https://www.cityofchicago.org/content/dam/city/depts/cdph/tobacco_alchohol_and_drug_abuse/2016ChicagoOpioidReport.pdf

Figure 2. Newly Reported HCV Diagnoses in 2012 and 2016 by Year of Birth, Chicago



Demographics

- Males make up a higher proportion of people living with HCV (61.6%) and those with recent diagnoses (59%)
- Race/ethnicity was missing for 46.3% of people recently diagnosed and 52.1% of those living with HCV
- 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, (56.0%, 58.6%) followed by NH Whites (21.2%, 21.8%) and Hispanics (15.8%, 13.7%)
- HCV prevalence was highest (37.4%) among people diagnosed between the ages of 50-59 years and living through 2016, compared to those diagnosed at other ages
- With less than 2% 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

Table 1. Newly Diagnosed Cases and People Living with HCV in 2016 by Selected Demographic Characteristics, Chicago

Demographic Characteristics	2016 Diagnoses			2016 Prevalence		
	No.	%	Rate	No.	%	Rate
Sex						
Male	1,785	59.0%	136.5	16,341	61.6%	1,249.2
Female	1,230	40.6%	88.6	10,060	37.9%	725.0
Unknown	11	0.4%	--	134	0.5%	--
Race/Ethnicity						
AI/AN, NH	<5	<1%	--	75	0.3%	--
Asian, NH	39	1.3%	--	303	1.1%	--
Black, NH	910	30.1%	--	7,447	28.1%	--
Hispanic	257	8.5%	--	1,737	6.5%	--
Other, NH	71	2.3%	--	382	1.4%	--
White, NH	345	11.4%	--	2,775	10.5%	--
Unknown	1,401	46.3%	--	13,816	52.1%	--
Age at Diagnosis						
<20	25	0.8%	3.6	186	0.7%	26.6
20-29	233	7.7%	46.7	1,277	4.8%	255.8
30-39	365	12.1%	83.0	2,862	10.8%	650.6
40-49	369	12.2%	105.6	5,708	21.5%	1,633.2
50-59	857	28.3%	275.1	9,929	37.4%	3,187.6
60-69	891	29.4%	438.3	5,059	19.1%	2,488.3
70+	286	9.5%	148.3	1,514	5.7%	785.0
Birth Cohort						
Pre 1945	226	7.5%	137.3	2,524	9.5%	1,532.9
1945-1965	1,772	58.6%	348.9	18,192	68.6%	3,582.1
1966-1986	784	25.9%	95.1	5,133	19.3%	622.5
Post 1986	244	8.1%	20.4	686	2.6%	57.2
Total	3,026		112.3	26,535		984.4

- Examining surveillance data by birth cohorts can provide insight into exposure risks prevalent during a certain time period:
  - Those in the 1945-1965 birth cohort are commonly referred to as "baby boomers" and were likely exposed to hepatitis C through contaminated blood or medical equipment
  - 68.6% of people living with HCV through 2016 were born between 1945 and 1965
  - Newly diagnosed infections among younger age groups are thought to be related to injection drug use
  - 8.1% of cases diagnosed in 2016 were born after 1986
- The rate of newly reported HCV diagnoses in Chicago for 2016 was 112.3 cases per 100,000 population which is lower than New York City (138.6)[15] and higher than Los Angeles County (91.9)[16] for the most recent years available. This is also more than triple the rate of new HIV diagnoses in Chicago, which was 31.1 cases per 100,000 population in 2016[17].
- The overall rate of people living with hepatitis C among Chicago residents in 2016 was 984.4 cases per 100,000 population. This exceeds the rate of people living with HIV infection in Chicago, which was 882.8 cases per 100,000 population in 2015[17].

Notes: *Groups may 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 2016 and living in 2016; 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. HCV cases by Year of Diagnosis and Selected Demographic Characteristics, Chicago, 2012-2016

Demographic Characteristics	Year of Diagnosis										EAPC
	2012		2013		2014		2015		2016		
	No.	%	No.	%	No.	%	No.	%	No.	%	
Sex											
Male	1,726	62.9%	1,579	63.1%	1,576	63.9%	1,561	62.9%	1,785	59.0%	0.6
Female	1,003	36.5%	912	36.5%	883	35.8%	920	37.1%	1,230	40.6%	4.2
Unknown	17	0.6%	10	0.4%	6	0.2%	<5	<1%	11	0.4%	
Race/Ethnicity											
AI/AN, NH	<5	<1%	<5	<1%	<5	<1%	5	0.2%	<5	<1%	--
Asian, NH	32	1.2%	22	0.9%	26	1.1%	24	1.0%	39	1.3%	4.8
Black, NH	937	34.1%	747	29.9%	689	28.0%	720	29.0%	910	30.1%	-1.0
Hispanic	205	7.5%	177	7.1%	144	5.8%	170	6.8%	257	8.5%	4.1
Other, NH	55	2.0%	43	1.7%	38	1.5%	26	1.0%	71	2.3%	0.1
White, NH	313	11.4%	245	9.8%	258	10.5%	312	12.6%	345	11.4%	4.4
Unknown	1,202	43.8%	1,265	50.6%	1,308	53.1%	1,226	49.4%	1,401	46.3%	
Age at Diagnosis											
<20	10	0.4%	14	0.6%	<5	<1%	8	0.3%	25	0.8%	12.7
20-29	105	3.8%	109	4.4%	96	3.9%	114	4.6%	233	7.7%	16.4
30-39	213	7.8%	217	8.7%	201	8.2%	218	8.8%	365	12.1%	10.8
40-49	460	16.8%	387	15.5%	335	13.6%	310	12.5%	369	12.2%	-6.6
50-59	1,137	41.4%	999	39.9%	914	37.1%	837	33.7%	857	28.3%	-7.4
60-69	633	23.1%	603	24.1%	706	28.6%	778	31.3%	891	29.4%	9.4
70+	188	6.8%	172	6.9%	209	8.5%	218	8.8%	286	9.5%	10.8
Birth Cohort											
Pre 1945	249	9.1%	214	8.6%	219	8.9%	204	8.2%	226	7.5%	-2.4
1945-1965	1,921	70.0%	1,698	67.9%	1,669	67.7%	1,649	66.4%	1,772	58.6%	-1.9
1966-1986	530	19.3%	523	20.9%	506	20.5%	539	21.7%	784	25.9%	8.1
Post 1986	46	1.7%	66	2.6%	71	2.9%	91	3.7%	244	8.1%	36.6
Total	2,746		2,501		2,465		2,483		3,026		1.9

- While males make up a higher proportion of those living with HCV, females have increased from 36.5% in 2012 to 40.6% in 2016 with an EAPC of 4.2% 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 60.7% in 2012 to 56% 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, 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 29.9% in 2012 to 38.9% in 2016. These increases may be attributable to national and local testing campaigns targeting "baby boomers."
- Those born after 1986 have the biggest EAPC (33.6%) for newly reported diagnoses between 2012-2016. The increased reports among younger populations may represent recent or ongoing transmission.

Notes: *Groups may 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.*

Geography

- All Chicago community areas had people living with hepatitis C and newly diagnosed cases in 2016
- Community areas with the highest rates of people living with hepatitis C (Map 1):
    - Southside – Fuller Park, Washington Park, Grand Boulevard, Englewood, West Englewood, Douglas, Oakland, Woodlawn, Greater Grand Crossing
    - Westside – East Garfield Park, West Garfield Park, Near West Side, North Lawndale, Austin, Humboldt Park
    - Northside – Uptown
- Community areas with the highest rates of people recently diagnosed with hepatitis C (Map 2):
    - Southside – Fuller Park, Washington Park, Greater Grand Crossing, Avalon Park, Englewood, Oakland, Pullman, Woodlawn, Chatham, Douglas, South Shore, West Englewood, New City, Auburn Gresham, Roseland, Riverdale, Clearing, Burnside, Grand Boulevard
    - Westside – East Garfield Park, North Lawndale, West Garfield Park, Near West Side, Austin, Humboldt Park
    - Northside – Uptown
- 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 expectancy[18]

Mortality

Hepatitis C as a cause of death

- Between 2010-2014, Chicago vital records data show that 412 death certificates had hepatitis C listed as a cause of death
- Using death certificate data, the age-adjusted rate for hepatitis C related deaths in 2014 was 3.9 per 100,000 population
- Community areas with the highest mortality rates for 2010-2014 were Fuller Park, Burnside and Humboldt Park
- Underreporting of hepatitis C as a cause of death makes vital records an unreliable source for estimating the burden of HCV

Any cause of death among reported cases

- By matching reported HCV cases to vital records data we know that there were actually almost 3,200 deaths among people with hepatitis C between 2010-2014 (Figure 1)
- Mortality among people with HCV in Chicago has steadily increased since 2005 (Figure 1)
- Deaths among reported HCV cases have surpassed the number of deaths among HIV cases since 2009[17] (Figure 1)
- In 2016, deaths among HCV cases rose to 826 while deaths among HIV cases have remained stable around 300 over the last few years[17] (Figure 1)

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

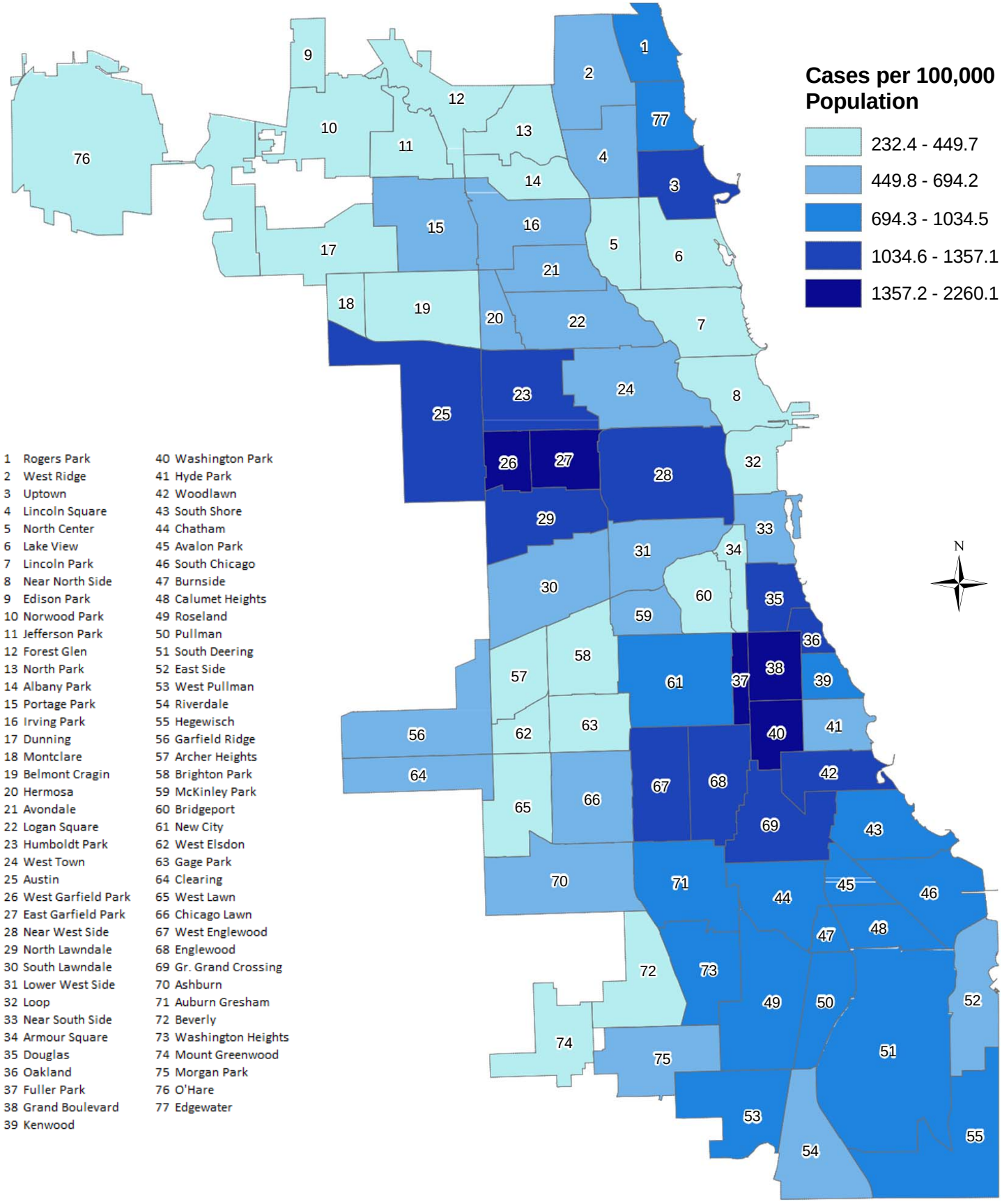
Disease reports can be faxed to the Chicago Department of Public Heath (CDPH) at 312.746.6388 or submitted electronically using the Illinois National Electronic Disease Surveillance System (INEDSS) which can be accessed through the Illinois Department of Public Health (IDPH) web portal (http://portalhome.dph.illinois.gov/).

While laboratories send details on the tests and results to IDPH electronically they do not send any 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*****

Map1. Rate of People Living with Hepatitis C by Community Area, Chicago, 2016



1 Rogers Park
2 West Ridge
3 Uptown
4 Lincoln Square
5 North Center
6 Lake View
7 Lincoln Park
8 Near North Side
9 Edison Park
10 Norwood Park
11 Jefferson Park
12 Forest Glen
13 North Park
14 Albany Park
15 Portage Park
16 Irving Park
17 Dunning
18 Montclare
19 Belmont Cragin
20 Hermosa
21 Avondale
22 Logan Square
23 Humboldt Park
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28 Near West Side
29 North Lawndale
30 South Lawndale
31 Lower West Side
32 Loop
33 Near South Side
34 Armour Square
35 Douglas
36 Oakland
37 Fuller Park
38 Grand Boulevard
39 Kenwood
40 Washington Park
41 Hyde Park
42 Woodlawn
43 South Shore
44 Chatham
45 Avalon Park
46 South Chicago
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50 Pullman
51 South Deering
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53 West Pullman
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55 Hegewisch
56 Garfield Ridge
57 Archer Heights
58 Brighton Park
59 McKinley Park
60 Bridgeport
61 New City
62 West Elsdon
63 Gage Park
64 Clearing
65 West Lawn
66 Chicago Lawn
67 West Englewood
68 Englewood
69 Gr. Grand Crossing
70 Ashburn
71 Auburn Gresham
72 Beverly
73 Washington Heights
74 Mount Greenwood
75 Morgan Park
76 O'Hare
77 Edgewater

Table 3. People Living with Hepatitis C (Prevalence) in 2016 by Community Area, Chicago

	Community Area	COUNT	RATE†		Community Area	COUNT	RATE†
1	Rogers Park	538	978.3	40	Washington Park	186	1,587.4
2	West Ridge	429	596.3	41	Hyde Park	138	537.4
3	Uptown	690	1,224.2	42	Woodlawn	271	1,141.5
4	Lincoln Square	190	481.1	43	South Shore	508	976.7
5	North Center	89	279.3	44	Chatham	321	1,034.5
6	Lake View	326	345.5	45	Avalon Park	92	903.3
7	Lincoln Park	221	344.7	46	South Chicago	265	849.4
8	Near North Side	311	386.4	47	Burnside	26	891.6
9	Edison Park	26	232.4	48	Calumet Heights	116	839.8
10	Norwood Park	102	275.5	49	Roseland	432	968.2
11	Jefferson Park	102	400.8	50	Pullman	66	901.0
12	Forest Glen	55	297.2	51	South Deering	136	900.1
13	North Park	75	418.3	52	East Side	115	499.1
14	Albany Park	205	397.7	53	West Pullman	248	836.4
15	Portage Park	317	494.4	54	Riverdale	45	694.2
16	Irving Park	261	489.1	55	Hegewisch	78	827.5
17	Dunning	185	441.2	56	Garfield Ridge	168	486.8
18	Montclare	59	439.4	57	Archer Heights	32	238.9
19	Belmont Cragin	342	434.3	58	Brighton Park	204	449.7
20	Hermosa	156	623.8	59	McKinley Park	82	525.2
21	Avondale	182	463.6	60	Bridgeport	127	397.2
22	Logan Square	443	608.6	61	New City	392	883.3
23	Humboldt Park	652	1,157.6	62	West Elsdon	60	331.3
24	West Town	491	597.1	63	Gage Park	136	340.9
25	Austin	1,187	1,204.9	64	Clearing	130	561.8
26	West Garfield Park	270	1,499.9	65	West Lawn	88	263.8
27	East Garfield Park	340	1,653.1	66	Chicago Lawn	385	692.1
28	Near West Side	740	1,348.4	67	West Englewood	425	1,197.0
29	North Lawndale	440	1,225.2	68	Englewood	416	1,357.1
30	South Lawndale	458	577.6	69	Gr. Grand Crossing	345	1,058.2
31	Lower West Side	170	475.3	70	Ashburn	214	520.9
32	Loop	97	331.3	71	Auburn Gresham	467	958.1
33	Near South Side	102	476.9	72	Beverly	74	369.4
34	Armour Square	49	365.9	73	Washington Heights	242	913.4
35	Douglas	211	1,156.9	74	Mount Greenwood	69	361.4
36	Oakland	68	1,149.0	75	Morgan Park	151	669.8
37	Fuller Park	65	2,260.1	76	O'Hare	55	431.2
38	Grand Boulevard	328	1,495.7	77	Edgewater	447	790.9
39	Kenwood	155	868.8		*Unknown CA*	*7,656*	--
					Chicago Total	**26,535**	**984.4**

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)*

Map 2. Rate of Newly Reported Hepatitis C Diagnoses in 2016 by Community Area, Chicago

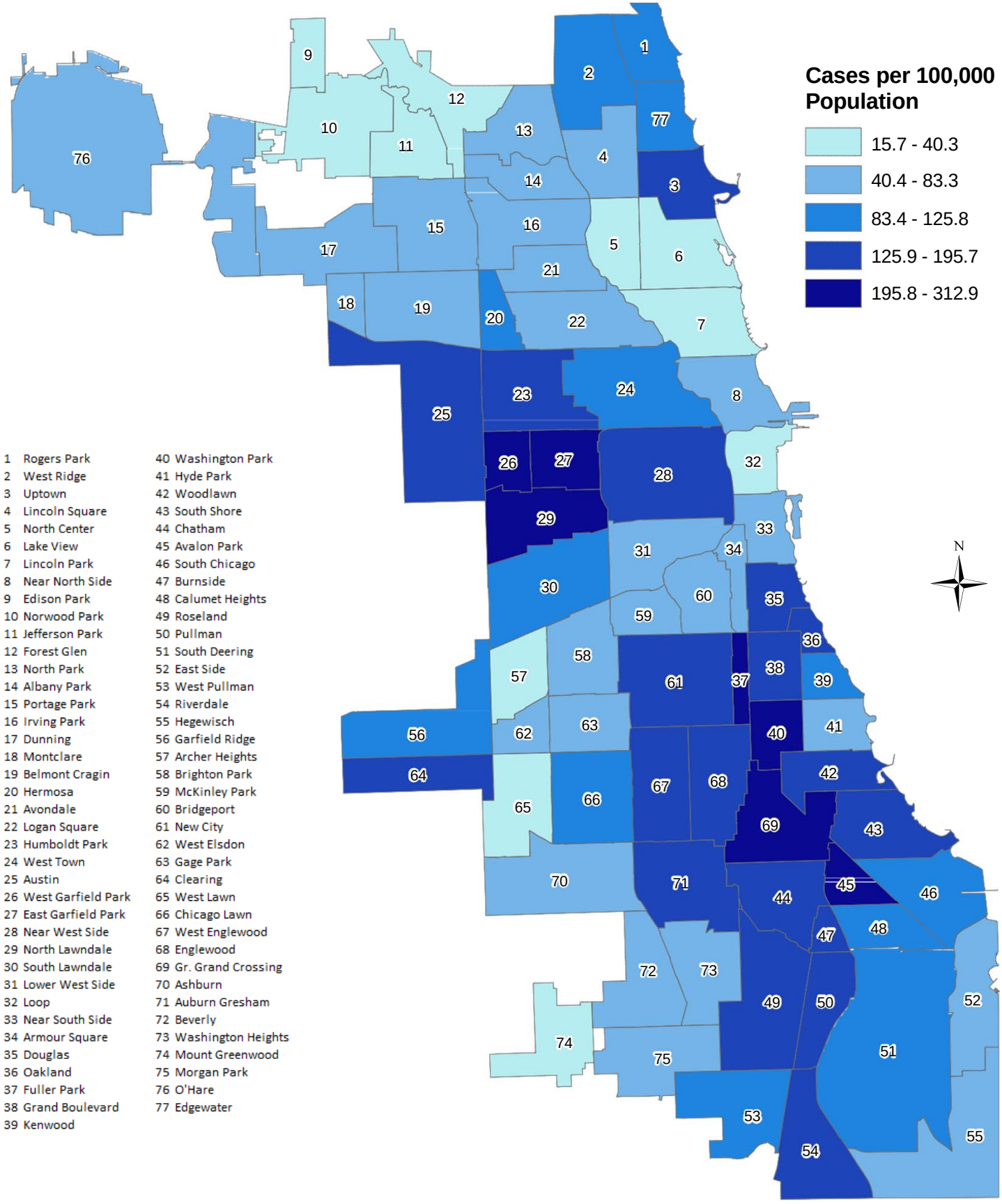

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Table 4. Newly Reported Hepatitis C Diagnoses in 2016 by Community Area, Chicago

	Community Area	COUNT	RATE†		Community Area	COUNT	RATE†
1	Rogers Park	54	98.2	40	Washington Park	29	247.5
2	West Ridge	69	95.9	41	Hyde Park	15	58.4
3	Uptown	79	140.2	42	Woodlawn	42	176.9
4	Lincoln Square	22	55.7	43	South Shore	88	169.2
5	North Center	7	22.0	44	Chatham	54	174.0
6	Lake View	38	40.3	45	Avalon Park	21	206.2
7	Lincoln Park	18	28.1	46	South Chicago	35	112.2
8	Near North Side	40	49.7	47	Burnside	<5	137.2
9	Edison Park	<5	35.8	48	Calumet Heights	12	86.9
10	Norwood Park	11	29.7	49	Roseland	65	145.7
11	Jefferson Park	9	35.4	50	Pullman	13	177.5
12	Forest Glen	7	37.8	51	South Deering	19	125.8
13	North Park	12	66.9	52	East Side	18	78.1
14	Albany Park	34	66.0	53	West Pullman	31	104.5
15	Portage Park	32	49.9	54	Riverdale	9	138.8
16	Irving Park	36	67.5	55	Hegewisch	7	74.3
17	Dunning	34	81.1	56	Garfield Ridge	36	104.3
18	Montclare	7	52.1	57	Archer Heights	<5	22.4
19	Belmont Cragin	63	80.0	58	Brighton Park	30	66.1
20	Hermosa	23	92.0	59	McKinley Park	13	83.3
21	Avondale	20	50.9	60	Bridgeport	16	50.0
22	Logan Square	42	57.7	61	New City	70	157.7
23	Humboldt Park	93	165.1	62	West Elsdon	11	60.7
24	West Town	73	88.8	63	Gage Park	31	77.7
25	Austin	171	173.6	64	Clearing	32	138.3
26	West Garfield Park	39	216.7	65	West Lawn	11	33.0
27	East Garfield Park	51	248.0	66	Chicago Lawn	64	115.0
28	Near West Side	96	174.9	67	West Englewood	56	157.7
29	North Lawndale	79	220.0	68	Englewood	60	195.7
30	South Lawndale	75	94.6	69	Gr. Grand Crossing	68	208.6
31	Lower West Side	22	61.5	70	Ashburn	33	80.3
32	Loop	6	20.5	71	Auburn Gresham	75	153.9
33	Near South Side	17	79.5	72	Beverly	11	54.9
34	Armour Square	9	67.2	73	Washington Heights	19	71.7
35	Douglas	31	170.0	74	Mount Greenwood	<5	15.7
36	Oakland	11	185.9	75	Morgan Park	15	66.5
37	Fuller Park	9	312.9	76	O'Hare	9	70.6
38	Grand Boulevard	30	136.8	77	Edgewater	60	106.2
39	Kenwood	20	112.1		*Unknown CA*	*345*	--
					Chicago Total	**3,026**	**112.3**

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)*

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List of Acronyms

AI/AN = American Indian/Alaskan Native
CDC = Centers for Disease Control and Prevention
CDPH = Chicago Department of Public Health
DAA = Direct Acting Antivirals
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
IDU = Injection Drug Use/Injection Drug User
INEDSS = Illinois National Electronic Disease Surveillance System
NH = Non-Hispanic

Technical Notes

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 may not represent recent transmission

Data sources for this report

- INEDSS HCV case reports (2007-present, also includes some pre-2007 legacy data) as of 5/30/2018
- CDPH viral hepatitis database (approximately 2001-2012)
- Vital records (Illinois 2008-2016, Chicago 1990-2016)
- 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 may 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 may represent the testing or reporting facility instead of the patient's address at diagnosis

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