

Hepatitis A, B and C Surveillance Report

New York City, 2006 and 2007

New York City Department of Health and Mental Hygiene
Division of Disease Control
Bureau of Communicable Diseases



Preface

This report from the New York City Department of Health and Mental Hygiene (DOHMH) summarizes 2006 and 2007 routine surveillance data for people newly reported with hepatitis A, B and C in New York City (NYC).

- The report includes cases that were diagnosed in 2006 and 2007.
- All rates were calculated using 2006 intercensal estimates (2007 intercensal estimates are not yet final).
- Differences in data between this report and previous reports may be due to factors such as delays in disease reporting, correction of errors, and refinements in data processing (for example, the removal of duplicate disease reports).
- See the Appendix on page 30 for details on United Hospital Fund (UHF) neighborhoods.
- Rates based on small numerators may not be reliable and should be interpreted with caution.
- A note on Riker's Island data: The jail at Rikers Island is part of the borough of the Bronx, although it has a Queens ZIP code (11370). (Note that ZIP code 11370 includes parts of mainland Queens and Rikers Island.) Therefore:
 - For numbers and rates presented by borough, Rikers cases are included with other Bronx cases.
 - For numbers and rates presented by ZIP code, Rikers is included in ZIP code 11370.
 - For numbers and rates presented by UHF neighborhood, Rikers is included in the UHF neighborhood of West Queens.

Questions? Need more information? Call the Health Department's Bureau of Communicable Diseases at (212) 788-9830 or visit www.nyc.gov/health

Contents

Preface	2
Hepatitis A	4
Acute Hepatitis B	9
Chronic Hepatitis B	15
Hepatitis B in Pregnancy	20
Acute Hepatitis C	23
Chronic Hepatitis C	24

Tables

Table 1. Hepatitis A in New York City Residents, 2006 and 2007.	5
Table 2. Hepatitis A in New York City Residents, by United Hospital Fund Neighborhood, 2006 and 2007.	6
Table 3. Acute Hepatitis B in New York City Residents, 2006 and 2007.	10
Table 4. Acute Hepatitis B in New York City Residents, by United Hospital Fund Neighborhood, 2006 and 2007.	12
Table 5. People Newly Reported with Chronic Hepatitis B in New York City, 2006 and 2007.	16
Table 6. People Newly Reported with Chronic Hepatitis B in New York City, by United Hospital Fund Neighborhood, 2006 and 2007.	17
Table 7. Hepatitis B in Pregnancy, New York City Residents, 2006 and 2007.	21
Table 8. Perinatal Hepatitis Infections in Infants Younger than 2 Years of Age, New York City, 2006 and 2007.	22
Table 9. People Newly Reported with Chronic Hepatitis C in New York City, 2006 and 2007.	25
Table 10. People Newly Reported with Chronic Hepatitis C in New York City, by United Hospital Fund Neighborhood, 2006 and 2007.	26

Maps

Map 1. Hepatitis A in New York City Residents, by United Hospital Fund Neighborhood, 2006 and 2007.	8
Map 2. Acute Hepatitis B in New York City Residents, by United Hospital Fund Neighborhood, 2006 and 2007.	14
Map 3. People Newly Reported with Chronic Hepatitis B in New York City, by ZIP Code, 2006 and 2007.	19
Map 4. People Newly Reported with Chronic Hepatitis C in New York City, by ZIP Code, 2006 and 2007.	28
Map 5. United Hospital Fund Neighborhoods	29

Appendix

United Hospital Fund Neighborhoods.	30
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Hepatitis A

When interpreting New York City's hepatitis A surveillance data, keep the following in mind:

- Health care providers and laboratories are required to report hepatitis A cases to the Health Department, including positive results for hepatitis A IgM antibody.
- The data represent patients meeting the Centers for Disease Control and Prevention/ Council of State and Territorial Epidemiologists (CDC/CSTE) case definition, which includes symptoms consistent with hepatitis A. For more information, visit: www.cdc.gov/ncphi/diss/nndss/casedef/case_definitions.htm
- Many people with hepatitis A have no symptoms or only mild symptoms. As a result, some patients with hepatitis A may not be diagnosed and reported to the Health Department. Therefore, the data may under-represent the true incidence of hepatitis A in NYC.
- In 2006, the CDC Advisory Committee on Immunization Practices published new hepatitis A vaccine guidelines to help prevent the spread of hepatitis A. This includes recommendations to routinely vaccinate children 12 to 24 months of age. For more information, visit: www.cdc.gov/hepatitis/HAV/HAVfaq.htm#vaccine

Table 1. Hepatitis A in New York City Residents, 2006 and 2007.

Group	2006			2007		
	Number	Percentage (%) of each group	Rate per 100,000 people	Number	Percentage (%) of each group	Rate per 100,000 people
Overall	122	n/a	1.5	158	n/a	1.9
Sex						
Male	62	50.8	1.6	92	58.2	2.4
Female	59	48.4	1.4	66	41.8	1.5
Age (in years)						
0–4	7	5.7	1.2	8	5.1	1.4
5–9	14	11.5	2.7	9	5.7	1.7
10–19	31	25.4	2.9	28	17.7	2.6
20–29	31	25.4	2.7	41	25.9	3.5
30–39	18	14.8	1.4	32	20.3	2.4
40–49	9	7.4	0.7	17	10.8	1.4
50–59	4	3.3	0.4	8	5.1	0.8
60 +	8	6.6	0.6	15	9.5	1.1
Borough of Residence						
Manhattan	25	20.5	1.6	36	22.8	2.2
Bronx	27	22.1	2.0	23	14.6	1.7
Brooklyn	29	23.8	1.2	33	20.9	1.3
Queens	40	32.8	1.8	60	38.0	2.7
Staten Island	0	0	0	6	3.8	1.3
Risk Factors (mutually exclusive)*						
International travel	75	61.5	n/a	69	43.7	n/a
Contact with a case	7	5.7	n/a	5	3.2	n/a
Men who have sex with men	4	3.3	n/a	12	7.6	n/a
Intravenous drug use	1	0.8	n/a	4	2.5	n/a
Unknown	35	28.7	n/a	68	43.0	n/a

* There were 7 patients in 2006 and 8 patients in 2007 with 2 risk factors for hepatitis A: Contact with a hepatitis A patient and international travel. Since it was not possible to determine which risk factor caused their hepatitis A infection, these patients were counted once, for their international travel exposure.

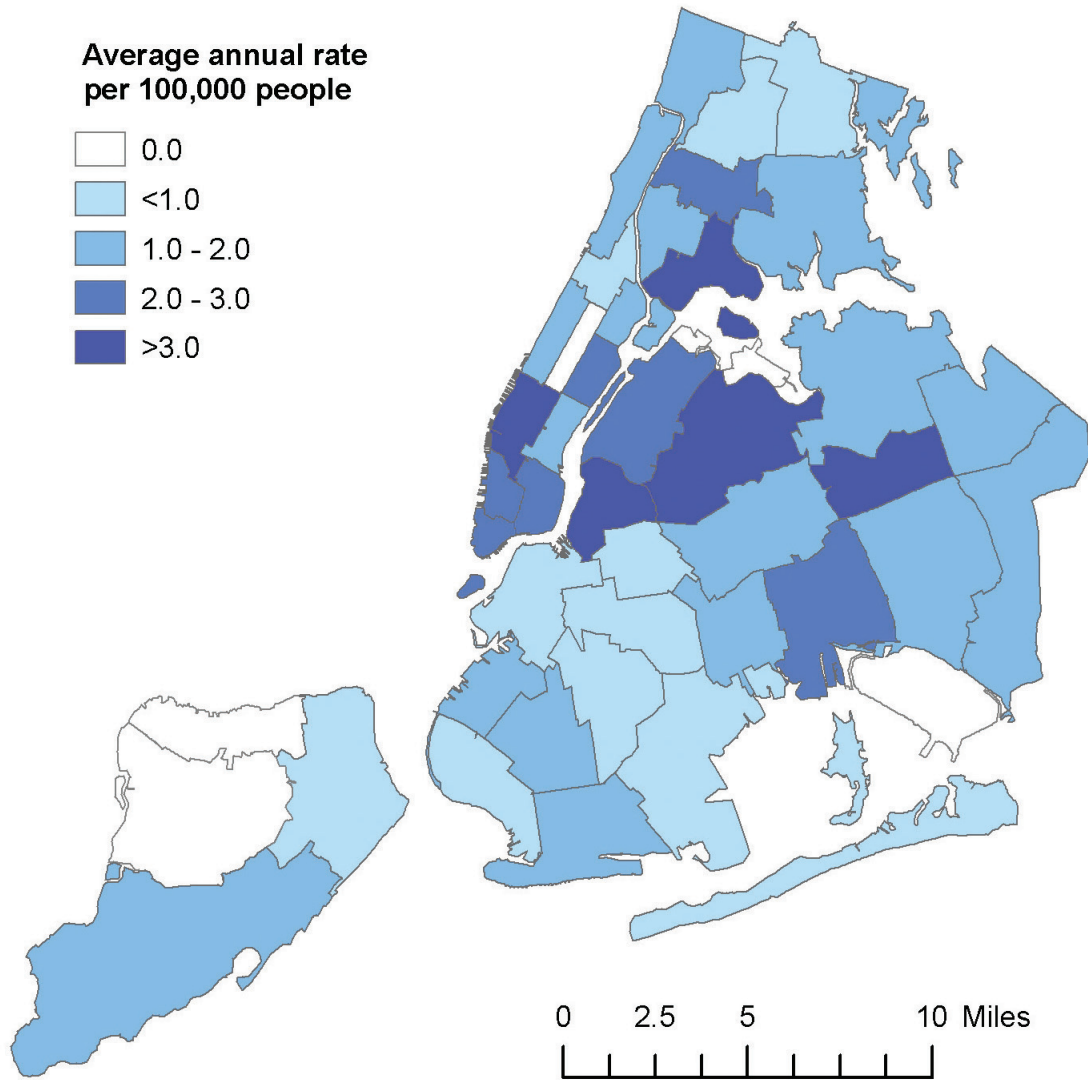
Table 2. Hepatitis A in New York City Residents, by United Hospital Fund Neighborhood, 2006 and 2007.

Borough/UHF Neighborhood	2006		2007	
	Number	Rate per 100,000 people	Number	Rate per 100,000 people
Manhattan				
Washington Heights-Inwood	6	2.3	2	0.8
Central Harlem-Morningside Heights	0	0	1	0.7
East Harlem	1	0.9	2	1.9
Upper West Side	1	0.4	5	2.1
Upper East Side	3	1.3	7	2.9
Chelsea-Clinton	1	0.7	11	8.2
Gramercy Park-Murray Hill	1	0.8	3	2.3
Greenwich Village-Soho	1	1.1	3	3.3
Union Square-Lower East Side	7	3.3	2	0.9
Lower Manhattan	2	5.7	0	0
Bronx				
Kingsbridge-Riverdale	2	2.3	1	1.2
Northeast Bronx	2	1.1	1	0.5
Fordham-Bronx Park	2	0.8	3	1.2
Pelham-Throgs Neck	4	1.4	6	2.0
Crotona-Tremont	6	2.9	3	1.5
High Bridge-Morrisania	5	2.5	3	1.5
Hunts Point-Mott Haven	7	5.4	6	4.6
Brooklyn				
Greenpoint	9	7.0	4	3.1
Williamsburg-Bushwick	1	0.5	2	1.0
Downtown-Heights-Slope	4	1.8	0	0
Bedford Stuyvesant-Crown Heights	3	1.0	0	0
East New York	3	1.7	4	2.3
Sunset Park	3	2.4	0	0
Borough Park	3	0.9	7	2.1
East Flatbush-Flatbush	0	0	5	1.6
Canarsie-Flatlands	0	0	3	1.5
Bensonhurst-Bay Ridge	2	1.0	2	1.0
Coney Island-Sheepshead Bay	3	1.0	6	2.0

Table 2. Hepatitis A in New York City Residents, by United Hospital Fund Neighborhood, 2006 and 2007 (continued).

Borough/UHF Neighborhood	2006		2007	
	Number	Rate per 100,000 people	Number	Rate per 100,000 people
Queens				
Long Island City-Astoria	5	2.3	4	1.8
West Queens	14	2.8	27	5.4
Flushing-Clearview	6	2.2	4	1.5
Bayside-Littleneck	0	0	2	2.3
Ridgewood-Forest Hills	3	1.3	5	2.1
Fresh Meadows	3	3.2	4	4.3
Southwest Queens	5	1.8	6	2.2
Jamaica	3	1.0	3	1.0
Southeast Queens	1	0.5	4	2.0
Rockaway	0	0	1	0.9
Staten Island				
Port Richmond	0	0	0	0
Stapleton-St. George	0	0	1	0.8
Willowbrook	0	0	0	0
South Beach-Tottenville	0	0	5	2.7

Map 1. Hepatitis A in New York City Residents, by United Hospital Fund Neighborhood, 2006 and 2007.



Acute Hepatitis B

When interpreting New York City's acute hepatitis B surveillance data, keep the following in mind:

- Health care providers and laboratories are required to report hepatitis B cases to DOHMH, including positive results for hepatitis B core IgM antibody.
- DOHMH investigates all positive hepatitis B core IgM antibody reports. The agency also investigates other positive hepatitis B reports with significantly elevated liver function tests.
- The data represent patients meeting the CDC/CSTE case definition, which includes symptoms consistent with acute hepatitis. For more information, visit: www.cdc.gov/ncphi/diss/nndss/casedef/case_definitions.htm
- Many people with hepatitis B have no symptoms or only mild symptoms. As a result, the infection may not be diagnosed or reported to the DOHMH. If there is no hepatitis B core IgM antibody test result, DOHMH will not generally investigate the report (even if it shows a positive hepatitis B surface antigen test due to a high number of hepatitis B surface antigen test reports). The data may under-represent, therefore, the true incidence of acute hepatitis B in NYC.
- Acute hepatitis B rates are very low among youths because of high vaccination levels due to:
 - Since 1992, infants have been routinely vaccinated.
 - Since 2000, vaccination has been required before a student can start middle school in NYC.
- Consider the following when interpreting risk factor data: Patients are interviewed about risk factors by telephone and may be reluctant to discuss sensitive risk factors such as sexual behavior or drug use. In addition:
 - In some cases, risk factor information is also obtained from clinical records
 - It can be difficult to determine how a new hepatitis B infection occurred. Because of the long exposure period, patients may report more than one risk behavior or may not reveal all risk behaviors.

Table 3. Acute Hepatitis B in New York City Residents, 2006 and 2007.

Group	2006			2007		
	Number	Percentage (%) of each group	Rate per 100,000 people	Number	Percentage (%) of each group	Rate per 100,000 people
Overall	126	n/a	1.5	121	n/a	1.5
Sex						
Male	98	77.8	2.5	79	65.3	2.0
Female	28	22.2	0.7	42	34.7	1.0
Age (in years)						
0–19	1	0.8	0.1	1	0.8	0.1
20–29	25	19.8	2.2	16	13.2	1.4
30–39	40	31.8	3.0	38	31.4	2.9
40–49	31	24.6	2.5	31	25.6	2.5
50–59	17	13.5	1.7	19	15.7	1.9
60 +	12	9.5	0.9	16	13.2	1.2
Borough of Residence						
Manhattan	33	26.2	2.1	28	23.1	1.7
Bronx	20	15.9	1.5	31	25.6	2.3
Brooklyn	40	31.7	1.6	35	28.9	1.4
Queens	26	20.6	1.2	24	19.8	1.1
Staten Island	7	5.6	1.5	3	2.5	0.6
Risk Factors (not mutually exclusive)*						
Injection drug use	5	4.0	n/a	9	7.4	n/a
Contact with hepatitis B-infected individual	9	7.1	n/a	7	5.8	n/a
Men who have sex with men	28	22.2	n/a	17	14.1	n/a
Heterosexual contact (multiple partners)	26	20.6	n/a	30	24.8	n/a
Heterosexual contact (one partner)	35	27.8	n/a	33	27.3	n/a
Health care-related exposure	14	11.1	n/a	17	14.1	n/a
Dental care	12	9.5	n/a	16	13.2	n/a
Occupational risk	5	4.0	n/a	4	3.3	n/a
Other	21	16.7	n/a	28	23.1	n/a
Unknown	31	24.6	n/a	30	24.8	n/a

Table 3. Acute Hepatitis B in New York City Residents, 2006 and 2007 (continued).

Group	2006			2007		
	Number	Percentage (%) of each group	Rate per 100,000 people	Number	Percentage (%) of each group	Rate per 100,000 people
Risk Factors (mutually exclusive)*						
Injection drug use	5	4.0	n/a	9	7.4	n/a
Contact with hepatitis B-infected individual	9	7.1	n/a	7	5.8	n/a
Men who have sex with men	26	20.6	n/a	16	13.2	n/a
Heterosexual contact (multiple partners)	23	18.3	n/a	25	20.7	n/a
Heterosexual contact (1 partner)	25	19.8	n/a	27	22.3	n/a
Health care-related exposure	6	4.8	n/a	3	2.5	n/a
Dental care	0	0	n/a	1	0.8	n/a
Occupational risk	0	0	n/a	0	0	n/a
Other	1	0.8	n/a	3	2.5	n/a
Unknown	31	24.6	n/a	30	24.8	n/a

*In this table, risk factor information is presented in 2 ways:

1. "Not mutually exclusive" means that all reported risk factors are shown, bringing the total to more than 100%. For example, a person who injected drugs and had surgery during the exposure period will be represented in both the "Health care-related" and "Injection drug use" rows.
2. "Mutually exclusive" means that each patient is represented by the risk factor that poses the highest risk of hepatitis B infection, among risks reported. The table shows risk factors from highest to lowest risk. For example, a person who injected drugs and had surgery during the exposure period will be represented only once, in the "Injection drug use" row.

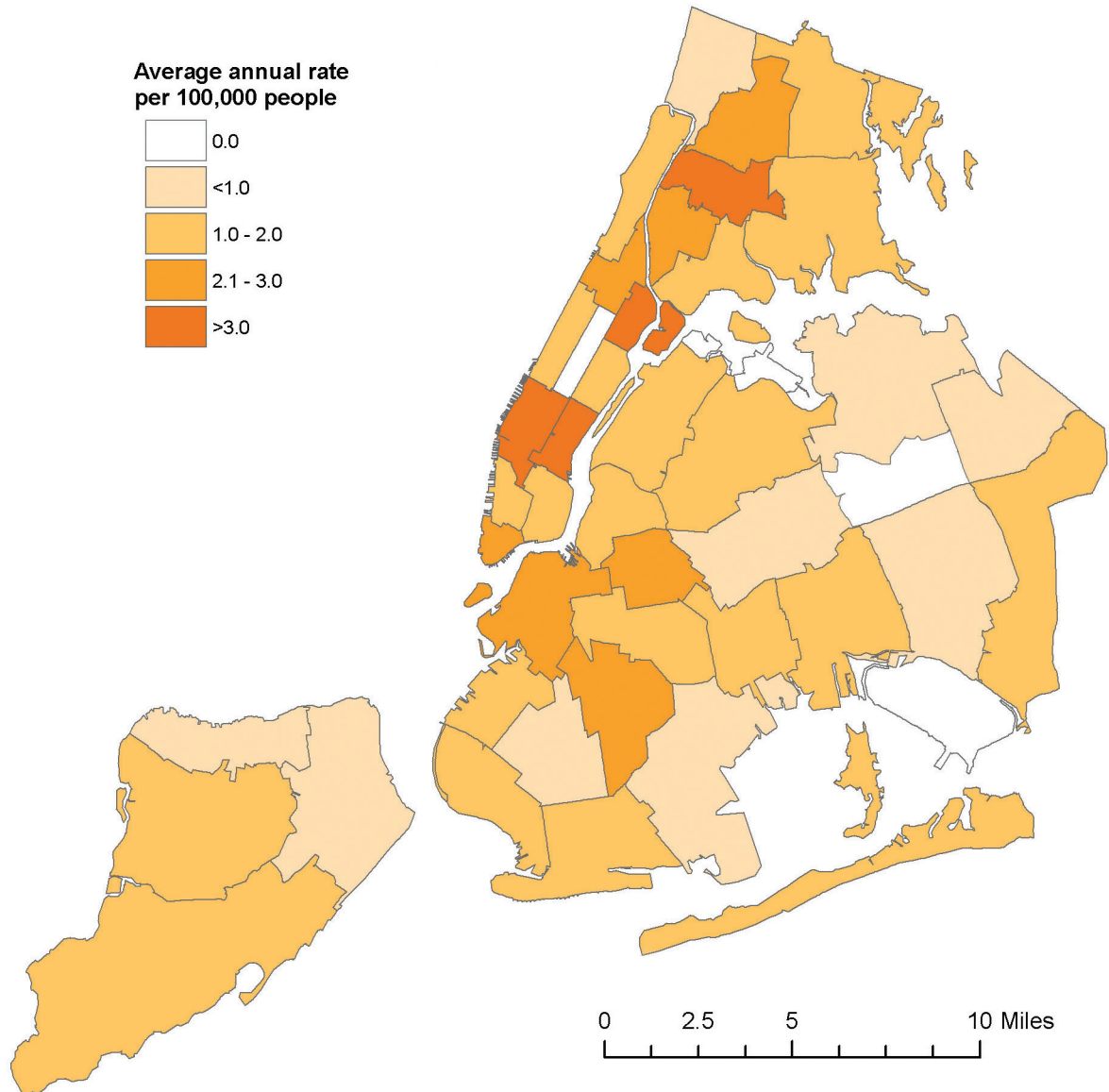
Table 4. Acute Hepatitis B in New York City Residents, by United Hospital Fund Neighborhood, 2006 and 2007.

Borough/UHF Neighborhood	2006		2007	
	Number	Rate per 100,000 people	Number	Rate per 100,000 people
Manhattan				
Washington Heights-Inwood	3	1.1	3	1.1
Central Harlem-Morningside Heights	4	2.7	2	1.4
East Harlem	5	4.6	2	1.9
Upper West Side	4	1.7	2	0.8
Upper East Side	4	1.7	1	0.4
Chelsea-Clinton	6	4.5	7	5.2
Gramercy Park-Murray Hill	2	1.5	6	4.5
Greenwich Village-Soho	0	0	2	2.2
Union Square-Lower East Side	4	1.9	3	1.4
Lower Manhattan	1	2.9	1	2.9
Bronx				
Kingsbridge-Riverdale	1	1.2	0	0
Northeast Bronx	2	1.1	4	2.1
Fordham-Bronx Park	4	1.6	7	2.7
Pelham-Throgs Neck	4	1.4	2	0.7
Crotona-Tremont	4	1.9	9	4.4
High Bridge-Morrisania	3	1.5	5	2.5
Hunts Point-Mott Haven	1	0.8	2	1.5
Brooklyn				
Greenpoint	3	2.3	0	0
Williamsburg - Bushwick	1	0.5	7	3.6
Downtown - Heights - Slope	8	3.7	2	0.9
Bedford Stuyvesant - Crown Heights	4	1.3	7	2.2
East New York	2	1.1	3	1.7
Sunset Park	1	0.8	3	2.4
Borough Park	2	0.6	2	0.6
East Flatbush - Flatbush	8	2.6	7	2.2
Canarsie - Flatlands	3	1.5	0	0
Bensonhurst - Bay Ridge	5	2.5	1	0.5
Coney Island - Sheepshead Bay	3	1.0	3	1.0

Table 4. Acute Hepatitis B in New York City Residents, by United Hospital Fund Neighborhood, 2006 and 2007 (continued).

Borough/UHF Neighborhood	2006		2007	
	Number	Rate per 100,000 people	Number	Rate per 100,000 people
Queens				
Long Island City-Astoria	3	1.4	4	1.8
West Queens	9	1.8	5	1.0
Flushing-Clearview	2	0.8	2	0.8
Bayside-Littleneck	0	0	1	1.1
Ridgewood-Forest Hills	4	1.7	0	0
Fresh Meadows	0	0	0	0
Southwest Queens	3	1.1	5	1.9
Jamaica	2	0.7	2	0.7
Southeast Queens	2	1.0	4	2.0
Rockaway	2	1.9	2	1.9
Staten Island				
Port Richmond	0	0	1	1.4
Stapleton-St. George	2	1.6	0	0
Willowbrook	1	1.1	1	1.1
South Beach-Tottenville	4	2.1	1	0.5

Map 2. Acute Hepatitis B in New York City Residents, by United Hospital Fund Neighborhood, 2006 and 2007.



Chronic Hepatitis B

When interpreting NYC chronic hepatitis B surveillance data, keep the following in mind:

- Health care providers and laboratories are required to report hepatitis B cases to DOHMH, including positive results for:
 - Hepatitis B surface antigen
 - Hepatitis B e antigen
 - Hepatitis B Nucleic Acid Test (NAT)
- This report includes chronic hepatitis B patients newly reported to DOHMH in 2006 and 2007. Most have chronic hepatitis B; however, a small percentage may have had acute hepatitis B and are no longer infected or had a false-positive test result.
- Some people with chronic hepatitis B have never been tested or diagnosed. These people, therefore, have not been reported to DOHMH and are not included in this report.
- DOHMH often receives more than one report for each person with chronic hepatitis B and uses automatic de-duplication methods to identify repeat reports, based on name, date of birth and other information. Only the first report is counted in the data presented.
- DOHMH's de-duplication methods may be imperfect. As a result, some people inadvertently may be counted more than once (e.g., if there is a name or birth date discrepancy), resulting in an overestimation of the number of people with chronic hepatitis B.
- The rates presented are not prevalence rates.
- The data include patients diagnosed with hepatitis B (or who had a specimen collection) for the first time in 2006 or 2007.
- The Health Department does not routinely investigate hepatitis B reports because of the large volume. Therefore:
 - It is difficult to determine when people with hepatitis B were first infected. Most were probably infected a while ago.
 - Risk factor information is not available.
 - Address information is missing for some patients, but most probably reside in NYC.
- DOHMH's educational booklet, *Hepatitis B: The Facts*, is sent to people newly reported with hepatitis B. The booklet:
 - Was designed to help those infected learn more about hepatitis B so they can stay healthy.
 - Is available at www.nyc.gov/html/doh/downloads/pdf/cd/cd-hepb-bro.pdf
 - Can be ordered free of charge, in bulk, in English, Chinese, Korean, Spanish and French. Please call 311 or visit www.nyc.gov/html/doh/html/cd/cdhepc-hcp4.shtml

Table 5. People Newly Reported with Chronic Hepatitis B in New York City, 2006 and 2007.

Group	2006			2007		
	Number	Percentage (%) of each group	Rate per 100,000 people	Number	Percentage (%) of each group	Rate per 100,000 people
Overall	12,304	n/a	149.8	12,652	n/a	154.0
Sex						
Male	6,628	53.9	169.3	7,020	55.5	179.3
Female	5,223	42.4	121.5	5,377	42.5	125.1
Unknown	453	3.7	n/a	255	2.0	n/a
Age (in years)						
0–19	600	4.9	27.8	613	4.8	28.4
20–29	2,685	21.8	231.9	3,064	24.2	264.6
30–39	2,949	24.0	224.3	3,228	25.5	245.5
40–49	2,523	20.5	204.9	2,614	20.7	212.3
50–59	1,725	14.0	172.3	1,706	13.5	170.4
60 +	1,019	8.3	75.6	1,063	8.4	78.8
Unknown	803	6.5	n/a	364	2.9	n/a
Borough of Residence						
Manhattan	2,484	20.2	154.1	2,690	21.3	166.9
Bronx	1,148	9.3	84.3	1,367	10.8	100.4
Brooklyn	3,620	29.4	144.3	3,788	29.9	151.0
Queens	3,182	25.9	141.1	3,174	25.1	140.7
Staten Island	288	2.3	60.3	256	2.0	53.6
Unknown	1,582	12.9	n/a	1,377	10.9	n/a

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Table 6. People Newly Reported with Chronic Hepatitis B in New York City, by United Hospital Fund Neighborhood, 2006 and 2007.*

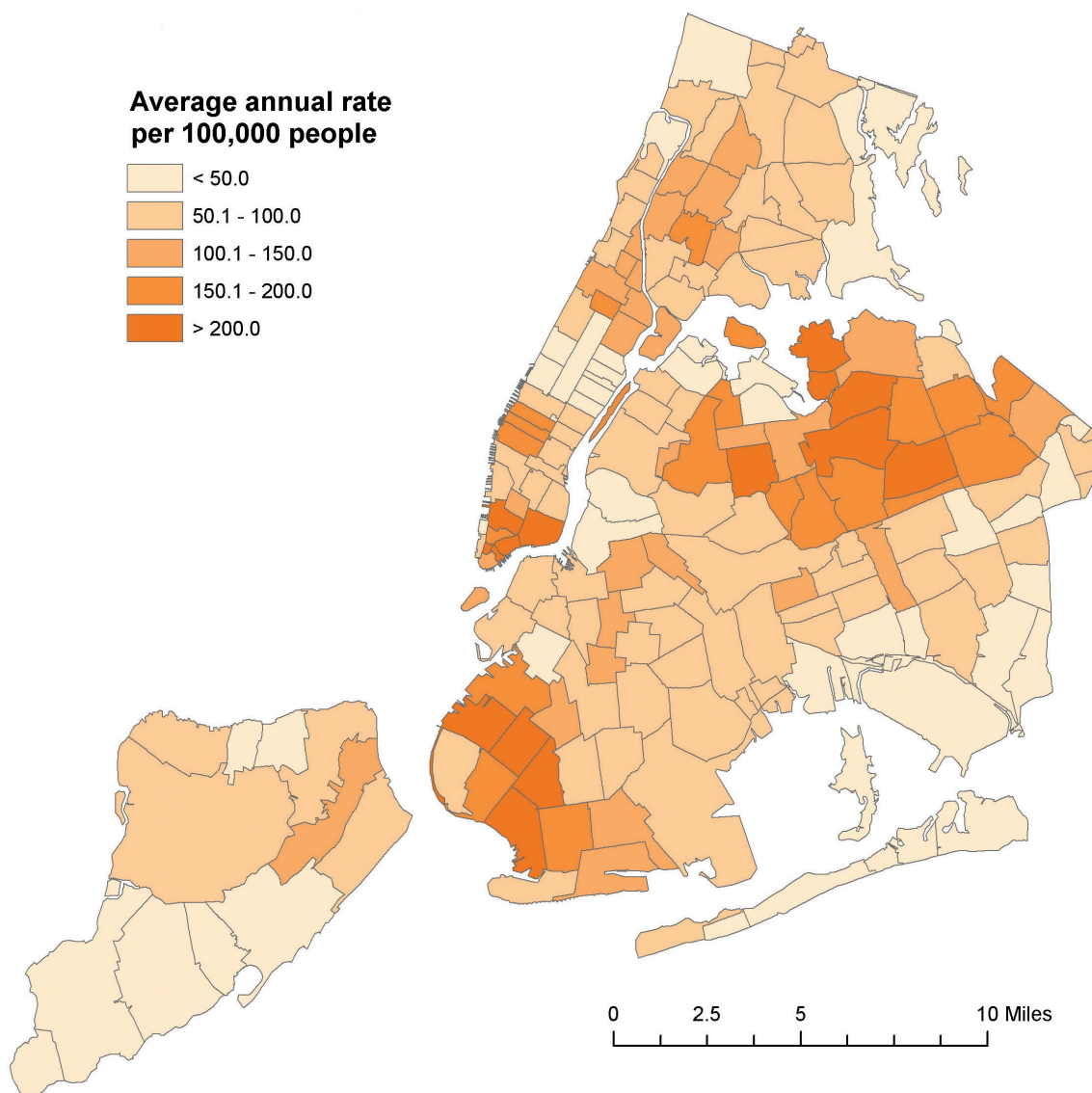
Borough/UHF Neighborhood	2006		2007	
	Number	Rate per 100,000 people	Number	Rate per 100,000 people
Unknown	1,719	n/a	1,450	n/a
Manhattan				
Washington Heights-Inwood	163	61.4	176	66.3
Central Harlem-Morningside Heights	184	126.0	205	140.4
East Harlem	121	112.3	116	107.7
Upper West Side	114	47.6	117	48.9
Upper East Side	102	42.6	81	33.8
Chelsea-Clinton	156	115.7	127	94.2
Gramercy Park-Murray Hill	95	71.9	103	78.0
Greenwich Village-Soho	244	267.0	327	357.8
Union Square-Lower East Side	1,194	561.8	1,313	617.8
Lower Manhattan	84	240.9	110	315.4
Bronx				
Kingsbridge-Riverdale	38	44.4	43	50.2
Northeast Bronx	93	49.8	117	62.7
Fordham-Bronx Park	231	90.6	230	90.2
Pelham-Throgs Neck	212	72.2	205	69.8
Crotona-Tremont	179	86.6	250	121.0
High Bridge-Morrisania	215	108.4	326	164.4
Hunts Point-Mott Haven	96	73.6	148	113.5
Brooklyn				
Greenpoint	67	52.2	47	36.6
Williamsburg-Bushwick	200	101.6	207	105.2
Downtown-Heights-Slope	153	70.4	126	57.9
Bedford Stuyvesant-Crown Heights	229	72.9	280	89.1
East New York	113	64.2	132	74.9
Sunset Park	1,027	816.5	1,145	910.3
Borough Park	660	195.6	689	204.2
East Flatbush-Flatbush	249	79.3	279	88.9
Canarsie-Flatlands	138	69.4	120	60.4
Bensonhurst-Bay Ridge	362	178.6	359	177.1
Coney Island-Sheepshead Bay	393	132.1	383	128.7

Table 6. People Newly Reported with Chronic Hepatitis B in New York City, by United Hospital Fund Neighborhood, 2006 and 2007* (continued).

Borough/UHF Neighborhood	2006		2007	
	Number	Rate per 100,000 people	Number	Rate per 100,000 people
Queens				
Long Island City-Astoria	180	82.6	187	85.8
West Queens	914	183.1	870	174.3
Flushing-Clearview	965	360.9	1,043	390.1
Bayside-Littleneck	152	172.1	122	138.1
Ridgewood-Forest Hills	298	126.6	275	116.8
Fresh Meadows	177	190.5	178	191.5
Southwest Queens	171	63.2	156	57.6
Jamaica	207	71.9	205	71.2
Southeast Queens	96	47.7	97	48.2
Rockaway	29	27.3	56	52.6
Staten Island				
Port Richmond	34	47.7	39	54.8
Stapleton-St. George	124	96.7	111	86.6
Willowbrook	48	53.4	42	46.7
South Beach-Tottenville	78	41.5	60	31.9

* Due to the large number of hepatitis B reports with missing address information, UHF numbers and rates are underestimates.

Map 3. People Newly Reported with Chronic Hepatitis B in New York City, by ZIP Code, 2006 and 2007.



Hepatitis B in Pregnancy

When interpreting NYC surveillance data on hepatitis B in pregnancy, keep the following in mind:

- Health care providers caring for pregnant women are required to test for hepatitis B (using the HBsAg test). Both health care providers and laboratories are required to report cases of hepatitis B in pregnant women to DOHMH.
- DOHMH uses CDC/CSTE case definition. A case of perinatal hepatitis B infection is defined as a positive HBsAg test in any infant between 1 month and 24 months of age who was born to an HBsAg-positive mother.
- Hepatitis B in pregnancy is a risk to the newborn due to the chance of the hepatitis B virus passing from mother to infant during the birth process (perinatal infection). Children infected perinatally have a 90% chance of developing chronic infection (compared to adults who have only a 6% to 10% chance of developing chronic hepatitis B infection). Preventing perinatal hepatitis B infections, therefore, is critical for preventing chronic hepatitis B infections.
- Infants born to mothers with hepatitis B should get hepatitis B immune globulin and a dose of hepatitis B vaccine within 12 hours of birth. The infants should also get the second and third doses of vaccine at 1 and 6 months of age. The hepatitis B immune globulin plus the 3 doses of hepatitis B vaccine is up to 95% effective at preventing perinatal hepatitis B infection.
- Infants born to mothers with hepatitis B infection should be tested for HBsAg and antibody to HBsAg at age nine months. The test results show the infant's hepatitis B status—infected, immune, or still susceptible. If the infant is susceptible, a second vaccine series is given.

Table 7. Hepatitis B in Pregnancy, New York City Residents, 2006 and 2007.

	2006		2007	
	Number	Percentage (%)	Number	Percentage (%)
All pregnancies	227,405	n/a	231,897	n/a
Cases of hepatitis B in pregnancy	1,983	.00872	2,111	0.00910
Borough of Residence				
Bronx	232	11.7	175	8.3
Brooklyn	731	36.9	710	33.6
Manhattan	430	21.7	397	18.8
Queens	492	24.8	426	20.2
Staten Island	57	2.9	41	1.9
Unknown	41	2.1	362	17.1
Race/Ethnicity				
Asian/Pacific Islander	1,268	63.9	1,274	60.4
Black/Hispanic	12	0.6	7	0.3
Black/Non-Hispanic	268	13.5	176	8.3
White/Hispanic	52	2.6	41	1.9
White-Non-Hispanic	86	4.3	80	3.8
Native American/Alaskan Native	1	0.1	0	0
Unknown	296	14.9	533	25.2
Birthplace				
United States	61	3.1	33	1.6
China	1,091	55.0	1,132	53.6
Other foreign born	489	24.7	339	16.1
Unknown	342	17.2	607	28.8

Table 8. Perinatal Hepatitis B Infections in Infants Younger than 2 Years of Age, New York City, 2006 and 2007.

Infants Tested	2006		2007	
	Number	Percentage (%)	Number	Percentage (%)
Total	1,058	n/a	1,074	n/a
Infected	21	2.0	31	2.9
Immune	959	90.6	947	88.2
Susceptible	55	5.2	68	6.3
Indeterminate	23	2.2	8	2.6

Acute Hepatitis C

Since acute hepatitis C infection is difficult to identify, NYC acute hepatitis C surveillance data are not included in this report. Acute hepatitis C is difficult to identify because:

- There are no symptoms with most acute hepatitis C infections. As a result, hepatitis C may not be diagnosed at the time of infection.
- There is no laboratory test for acute hepatitis C. Therefore, when a patient is diagnosed with hepatitis C, it is difficult to determine when they were infected.

Data on new hepatitis C infections are essential for planning effective prevention programs.

DOHMH therefore requests that clinicians report new and acute hepatitis C cases by phone, by mail or online according to the instructions below:

- Report by phone to DOHMH's Bureau of Communicable Diseases at (212) 788-9830.
- Report online by filling out the Universal Reporting Form, visit: www.nyc.gov/nycmed (call 212-313-5134 if you need assistance).
- Report by mail. To download a paper copy of the Universal Reporting Form, visit <http://nyc.gov/html/doh/html/hcp/hcp-urf.shtml>
- or more information about reporting acute hepatitis C cases, visit: www.nyc.gov/html/doh/downloads/pdf/cd/cdhepc_reporting.pdf

Chronic Hepatitis C

When interpreting NYC chronic hepatitis C surveillance data, keep the following in mind:

- Health care providers and laboratories are required to report hepatitis C cases to DOHMH, including positive results for:
 - Recombinant immunoblot assay (RIBA), an accurate test for antibodies to hepatitis C virus.
 - Enzyme-linked immunosorbent assay (EIA) antibody test with a high signal-to-cutoff value
 - Nucleic acid test (NAT) (e.g., polymerase chain reaction [PCR] test)
- Many chronic hepatitis C patients are asymptomatic. As a result, many people with chronic hepatitis C have not been diagnosed and are not reported. The data, therefore, may not represent the true level of chronic hepatitis C in NYC.
- In addition, some people included in the data may no longer have hepatitis C; they may have a positive antibody test but no longer have the virus. Based on published literature, less than 15% fall under this category.
- DOHMH often receives more than 1 laboratory report for each person with chronic hepatitis C and therefore uses automatic de-duplication methods to identify repeat reports, based on name, date of birth and other information. Only the first report is counted in the data presented.
- DOHMH's de-duplication methods may be imperfect; some people may inadvertently be counted more than once (e.g., if there is a discrepancy in the person's name or date of birth), resulting in an overestimation of the number of people with chronic hepatitis C.
- The rates presented are not prevalence rates.
- The data include positive hepatitis C results reported to DOHMH for the first time with a hepatitis C diagnosis date (or specimen collection date) in 2006 or 2007.
- For many patients, there is no information about address; most of them live in NYC.
- DOHMH does not routinely investigate hepatitis C reports because of the large volume; therefore:
 - Data on race or ethnicity are not available.
 - It is difficult to determine when people with chronic hepatitis C were first infected; most were probably infected a while ago.
 - Risk factor information is not available; the majority was likely infected through injection drug use or a blood transfusion before 1992 (when accurate blood tests became available and blood donor screenings started).
- DOHMH's educational booklet, *Hepatitis C: The Facts*, is sent to people newly reported with hepatitis C. The booklet:
 - Was designed to help those infected learn more about hepatitis C so they can stay healthy.
 - Is available at www.nyc.gov/html/doh/downloads/pdf/cd/cd-hepc-bro.pdf
 - Can be ordered free of charge, in bulk, in English, Russian, Spanish Arabic and Urdu – please call 311 or visit www.nyc.gov/html/doh/html/cd/cdhepc-hcp4.shtml

Table 9. People Newly Reported with Chronic Hepatitis C in New York City, 2006 and 2007.

Group	2006			2007		
	Number	Percentage (%) of each group	Rate per 100,000 people	Number	Percentage (%) of each group	Rate per 100,000 people
Overall	15,504	n/a	188.7	16,691	n/a	230.2
Sex						
Male	9,426	60.8	240.7	10,476	62.8	267.6
Female	5,706	36.8	132.8	5,805	34.8	134.9
Unknown	372	2.4	n/a	410	2.5	n/a
Age (in years)						
0–19	171	1.1	7.9	200	1.2	9.3
20–29	962	6.2	83.1	1,031	6.2	89.0
30–39	1,997	12.9	151.9	2,277	13.6	173.2
40–49	4,359	28.1	354.0	4,421	26.5	359.1
50–59	5,376	34.7	536.9	5,728	34.3	572.0
60–69	1,667	10.8	261.7	1,953	11.7	306.7
70–79	670	4.3	159.8	750	4.5	178.9
80+	302	2.0	103.2	331	2.0	113.1
Borough of Residence						
Manhattan	2,745	17.7	170.3	2,669	16.0	165.6
Bronx	3,360	21.7	246.8	4,799	28.8	352.5
Brooklyn	3,121	20.1	124.4	3,227	19.2	128.6
Queens	1,936	12.5	85.8	2,051	12.3	90.9
Staten Island	479	3.1	100.3	422	2.5	88.4
Unknown	3,863	24.9	n/a	3,523	21.1	n/a

Table 10. People Newly Reported with Chronic Hepatitis C in New York City, by United Hospital Fund Neighborhood, 2006 and 2007.*

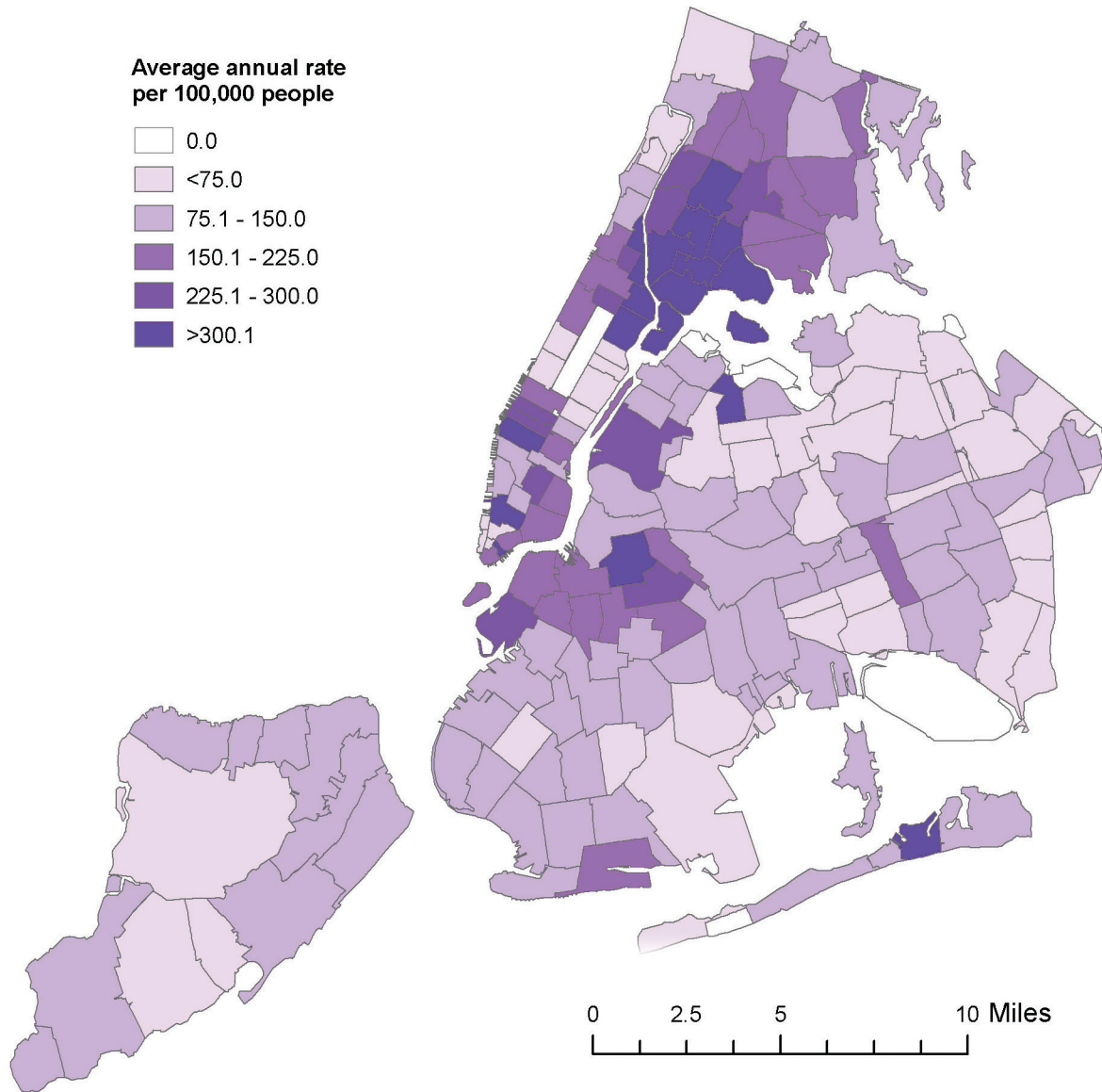
Borough/UHF Neighborhood	2006		2007	
	Number	Rate per 100,000 people	Number	Rate per 100,000 people
Unknown	4,038	n/a	3,642	n/a
Manhattan				
Washington Heights-Inwood	291	109.6	268	100.9
Central Harlem-Morningside Heights	394	269.8	358	245.1
East Harlem	457	424.2	486	451.1
Upper West Side	276	115.3	242	101.1
Upper East Side	174	72.6	144	60.1
Chelsea-Clinton	322	238.8	276	204.7
Gramercy Park-Murray Hill	156	118.1	178	134.7
Greenwich Village-Soho	168	183.8	192	210.1
Union Square-Lower East Side	400	188.2	454	213.6
Lower Manhattan	48	137.6	32	91.8
Bronx				
Kingsbridge-Riverdale	72	84.0	113	131.9
Northeast Bronx	193	103.4	229	122.7
Fordham-Bronx Park	389	152.5	490	192.1
Pelham-Throgs Neck	485	165.1	543	184.8
Crotona-Tremont	476	230.4	655	317.0
High Bridge-Morrisania	535	269.8	636	320.7
Hunts Point-Mott Haven	439	336.6	546	418.6
Brooklyn				
Greenpoint	170	132.5	130	101.3
Williamsburg-Bushwick	488	248.0	487	247.5
Downtown-Heights-Slope	363	166.9	347	159.6
Bedford Stuyvesant-Crown Heights	472	150.3	541	172.2
East New York	217	123.2	248	140.8
Sunset Park	137	108.9	114	90.6
Borough Park	288	85.4	270	80.0
East Flatbush-Flatbush	256	81.6	304	96.9
Canarsie-Flatlands	149	74.9	145	72.9
Bensonhurst-Bay Ridge	185	91.3	169	83.4
Coney Island-Sheepshead Bay	356	119.7	439	147.6

Table 10. People Newly Reported with Chronic Hepatitis C in New York City, by United Hospital Fund Neighborhood, 2006 and 2007* (continued).

Borough/UHF Neighborhood	2006		2007	
	Number	Rate per 100,000 people	Number	Rate per 100,000 people
Queens				
Long Island City-Astoria	299	137.1	244	111.9
West Queens	1,092	218.8	1,938	388.3
Flushing-Clearview	142	53.1	160	59.0
Bayside-Littleneck	53	60.0	59	66.8
Ridgewood-Forest Hills	208	88.4	185	78.6
Fresh Meadows	72	77.5	77	82.9
Southwest Queens	202	74.6	212	78.3
Jamaica	301	104.5	365	126.7
Southeast Queens	120	59.6	143	71.0
Rockaway	147	138.1	210	197.3
Staten Island				
Port Richmond	89	124.9	66	92.6
Stapleton-St. George	158	123.2	129	100.6
Willowbrook	65	72.3	66	73.4
South Beach-Tottenville	162	86.2	159	84.6

* Due to the large number of hepatitis C reports with missing address information, UHF numbers and rates are underestimates.

Map 4. People Newly Reported with Chronic Hepatitis C in New York City, by ZIP Code, 2006 and 2007.



Map 5. United Hospital Fund Neighborhoods.



Appendix: United Hospital Fund Neighborhoods.

Borough/UHF Neighborhood	ZIP Codes
Manhattan	
Washington Heights-Inwood	10031, 10032, 10033, 10034, 10040
Central Harlem-Morningside Heights	10026, 10027, 10030, 10037, 10039
East Harlem	10029, 10035
Upper West Side	10023, 10024, 10025
Upper East Side	10021, 10028, 10044, 10128
Chelsea-Clinton	10001, 10011, 10018, 10019, 10020, 10036
Gramercy Park-Murray Hill	10010, 10016, 10017, 10022
Greenwich Village-SoHo	10012, 10013, 10014
Union Square-Lower East Side	10002, 10003, 10009
Lower Manhattan	10004, 10005, 10006, 10007, 10038, 10280
Bronx	
Kingsbridge-Riverdale	10463, 10471
Northeast Bronx	10466, 10469, 10470, 10475
Fordham-Bronx Park	10458, 10467, 10468
Pelham-Throgs Neck	10461, 10462, 10464, 10465, 10472, 10473
Crotona-Tremont	10453, 10457, 10460
High Bridge-Morrisania	10451, 10452, 10456
Hunts Point-Mott Haven	10454, 10455, 10459, 10474
Brooklyn	
Greenpoint	11211, 11222
Williamsburg-Bushwick	11206, 11221, 11237
Downtown, Heights, Slope	11201, 11205, 11215, 11217, 11231
Bedford Stuyvesant-Crown Heights	11212, 11213, 11216, 11233, 11238
East New York	11207, 11208
Sunset Park	11220, 11232
Borough Park	11204, 11218, 11219, 11230
East Flatbush-Flatbush	11203, 11210, 11225, 11226
Canarsie-Flatlands	11234, 11236, 11239
Bensonhurst-Bay Ridge	11209, 11214, 11228
Coney Island-Sheepshead Bay	11223, 11224, 11229, 11235

Appendix: United Hospital Fund Neighborhoods (continued).

Borough/UHF Neighborhood	ZIP Codes
Queens	
Long Island City-Astoria	11101, 11102, 11103, 11104, 11105, 11106
West Queens	11368, 11369, 11370, 11372, 11373, 11377, 11378
Flushing-Clearview	11354, 11355, 11356, 11357, 11358, 11359, 11360
Bayside-Littleneck	11361, 11362, 11363, 11364
Ridgewood-Forest Hills	11374, 11375, 11379, 11385
Fresh Meadows	11365, 11366, 11367
Southwest Queens	11414, 11415, 11416, 11417, 11418, 11419, 11420, 11421
Jamaica	11412, 11423, 11432, 11433, 11434, 11435, 11436
Southeast Queens	11004, 11005, 11411, 11413, 11422, 11426, 11427, 11428, 11429
Rockaway	11691, 11692, 11693, 11694, 11697
Staten Island	
Port Richmond	10302, 10303, 10310
Stapleton-St. George	10301, 10304, 10305
Willowbrook	10314
South Beach-Tottenville	10306, 10307, 10308, 10309, 10312

