

Epi Data Brief

New York City Department of Health and Mental Hygiene

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Geographic Co-occurrence of HIV/AIDS, Viral Hepatitis, Sexually Transmitted Diseases and Tuberculosis in New York City

HIV/AIDS, viral hepatitis, sexually transmitted diseases (STDs) and tuberculosis (TB) often impact the same individuals and communities. Co-occurrence is the presence of two or more diseases in a population. Identifying neighborhoods with the greatest burden of co-occurring disease can help target resources and design neighborhood-level interventions, including education of residents, medical providers, and organizations that serve these geographic areas.

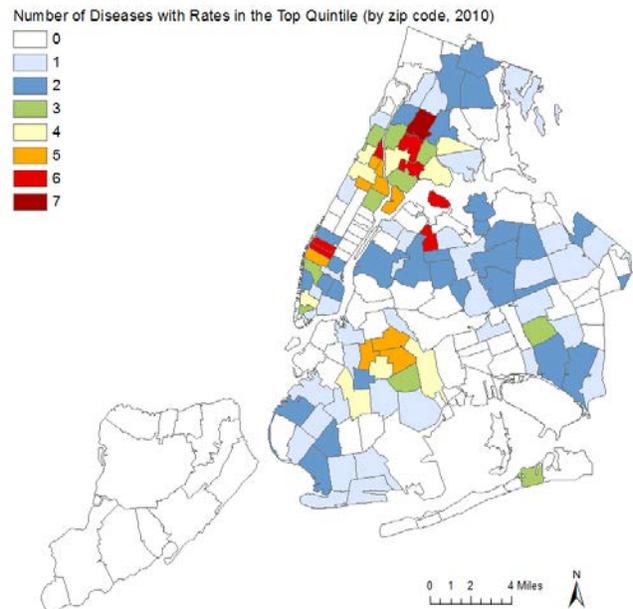
Methodology: Surveillance data of newly diagnosed cases from 2010 were provided by the Health Department's Bureau of HIV/AIDS Prevention and Control, Communicable Disease (hepatitis B, hepatitis C), STD Prevention and Control (chlamydia, gonorrhea, syphilis) and TB Control. Rates per 100,000 population for each disease were calculated by zip code using 2010 Census data. High-morbidity zip codes were defined as those with disease rates in the top quintile or 20% (36 zip codes for each disease) of all NYC zip codes. Zip codes were given a score (0-7) indicating the number of diseases for which they had rates in the top quintile. Maps are created based on the score for each zip code. Zip codes with fewer than 1,000 people were excluded from analysis.

Diseases analyzed: HIV/AIDS, hepatitis B, hepatitis C, chlamydia, gonorrhea, syphilis, tuberculosis (TB)

Disease co-occurrence by New York City neighborhood

- Of 181 NYC zip codes, 33% (60) are in the top quintile for multiple diseases. For example, zip code 10474 (Hunts Point, Bronx) has rates of hepatitis C, chlamydia, gonorrhea and HIV/AIDS in the top 20%, giving it a score of 4.
- Compared with other boroughs, the Bronx has the greatest percentage of zip codes in the top quintile for multiple diseases (68%). The percentage of zip codes in the top quintile for other boroughs is 45% in Manhattan, 25% in Queens, and 22% in Brooklyn.
- Staten Island has no high-morbidity zip codes. Within the borough, the Port Richmond neighborhood has the highest rates of chlamydia, gonorrhea and syphilis, while Stapleton-St. George has the highest rates of HIV/AIDS, TB and hepatitis B and C.
- Zip code 10457, in the Tremont neighborhood in the Bronx, is in the top quintile for all 7 diseases. In this zip code, 43% of the residents live below the federal poverty line, compared to the citywide poverty rate of 21%.
- HIV/AIDS and hepatitis C are in the top quintile in 23 zip codes, also primarily in the South Bronx, North-Central Brooklyn and Northern Manhattan, as well as the Manhattan neighborhoods of Chelsea-Clinton and the Rockaways in Queens.

New York City zip codes with rates of disease in the top quintile of all zip codes



Diseases: HIV/AIDS, hepatitis B, hepatitis C, chlamydia, gonorrhea, syphilis, TB
Sources: 2010 HIV/AIDS, Communicable Disease, STD and TB surveillance data

- Hepatitis B¹ and TB² disproportionately impact people born outside of the United States. In NYC, many neighborhoods with a large foreign-born population have high rates of TB and hepatitis B:
 - In Queens, 12 zip codes are in the top quintile for both hepatitis B and TB; these zip codes are in Flushing-Clearview, West Queens, Fresh Meadows, Bayside-Little Neck and Ridgewood-Forest Hills. In six of these 12 zip codes, the majority of residents were born outside the US.
 - Brooklyn has three zip codes in the top quintile for hepatitis B and TB, each with a foreign-born population between 46-50%. These zip codes are in the neighborhoods of Sunset Park, Bensonhurst-Bayridge and Borough Park.
- Several zip codes are in the top quintile for HIV/AIDS and other sexually transmitted diseases:
 - In 20 zip codes, HIV/AIDS and syphilis are in the top quintile; 13 of these 20 zip codes are in Manhattan, in the neighborhoods of Chelsea-Clinton, Central Harlem-Morningside Heights, East Harlem, Washington Heights-Inwood and Greenwich Village-SoHo.
 - In 19 zip codes, HIV/AIDS is in the top quintile with both chlamydia and gonorrhea. These zip codes are primarily in the South Bronx, North-Central Brooklyn, and Northern Manhattan, which are areas with high rates of poverty.

Newly diagnosed cases of disease in New York City, 2010

Disease	# of newly diagnosed cases	Average NYC rate*	Highest zip code rate*
HIV/AIDS	3,481	43	268
Hepatitis B	10,536	129	1,326
Hepatitis C	10,021	123	1,343
Chlamydia	63,544	777	2,402
Gonorrhea	12,354	151	587
Syphilis	955	12	126
Tuberculosis	711	9	47

*Per 100,000 residents

Sources: HIV/AIDS, Communicable Disease, STD and TB surveillance data

Strategic data sharing to identify co-occurrence of disease

The New York City Department of Health and Mental Hygiene's Division of Disease Control has implemented the Centers for Disease Control and Prevention (CDC) "Program Collaboration and Service Integration" (PCSI) initiative. PCSI is a strategic framework to strengthen collaboration across HIV/AIDS, viral hepatitis, STD and TB programs and to offer integrated services to the public. For more information, visit: www.cdc.gov/nchstp/programintegration/default.htm

Surveillance data are collected and analyzed independently by separate disease-specific programs within many health departments across the US, including in New York City. Therefore, the sharing of data across programs is essential to identifying neighborhoods with co-occurring high rates of infectious diseases.

Data Sources

2010 HIV/AIDS surveillance data, DOHMH Bureau of HIV/AIDS Prevention and Control, HIV Epidemiology and Field Services Program; 2010 hepatitis B and hepatitis C surveillance data, Bureau of Communicable Disease, Hepatitis Surveillance Program; 2010 chlamydia, gonorrhea and syphilis surveillance data, Bureau of STD Prevention and Control, Surveillance Unit; 2010 TB data, Bureau of TB Control, Office of Surveillance and Epidemiology.

Rates were calculated using zip code population counts from the 2010 Census. Data on poverty and place of birth for NYC residents are from the 2000 Census (most recent available). Variations in data between this report and other Health Department publications may be due to reporting delays, the availability of census data, corrections of errors, and refinements in data processing.

Neighborhood definition: The United Hospital Fund (UHF) classifies NYC into 42 neighborhoods, comprising contiguous zip codes.

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References

¹CDC Morbidity and Mortality Weekly Report, "Recommendations for Identification and Public Health Management of Persons with Chronic Hepatitis B Virus Infection." Sept. 19, 2008, vol. 57, No. RR-8 <http://www.cdc.gov/mmwr/pdf/rr/rr5708.pdf>

²NYC DOHMH Bureau of TB Control, Three Year Summary: 2009, 2010, 2011, <http://www.nyc.gov/html/doh/downloads/pdf/tb/tb-annualsummary09-11.pdf>

MORE New York City Health Data and Publications

- For complete tables of data presented in this Brief, visit www.nyc.gov/html/doh/downloads/pdf/epi/datatable20.pdf
- HIV/AIDS Surveillance Statistics: http://www.nyc.gov/html/doh/html/dires/epi_reports.shtml#2
- Hepatitis A, B and C Surveillance Reports: <http://www.nyc.gov/html/doh/html/cd/cd-hepabc-reports.shtml>
- STD Statistics and Reports: <http://www.nyc.gov/html/doh/html/std/std-stats.shtml>
- Tuberculosis Annual Reports: <http://www.nyc.gov/html/doh/html/tb/tb-reports.shtml>
- Visit EpiQuery – the Health Department's online, interactive health data system at www.nyc.gov/health/EpiQuery

My Community's Health: Data and Statistics at www.nyc.gov/health/mycommunityhealth