OVERVIEW

One of the most important first steps toward improving community health is the performance of a comprehensive community health assessment. In 1988, the Institute of Medicine's Committee for the Study of Public Health made the recommendation that every public health agency regularly collect, analyze and make available information on the health and health needs of the community. While the many diverse neighborhoods that make up New York City all share fundamental similarities, each has unique characteristics that define and set it apart. In order to better understand the health needs of all our communities and to encourage community members, health care practitioners and public health officials to work together toward the development of effective prevention programs and policies, the Department of Health is strongly committed to bringing a community-based focus to the analysis and interpretation of city health information.

With this report, *New York City Neighborhood Health Profiles: Manhattan, 2000*, the Department takes a significant step toward fulfilling its commitment to provide a comprehensive City Wide Community Health Profile. In recent years the New York City Department of Health has sponsored a series of community health forums in each of the city's five boroughs. Among the critical concerns expressed by participants at these meetings was the need for community-focused health data. In response, the Department of Health has already issued the *City Wide Community Health Profile: Age Group Perspective.* The present report, *New York City Neighborhood Health Profiles: Manhattan, 2000,* is one of five borough level reports that will profile the health of each New York City community.

BACKGROUND

Profiling Community Health

Many factors influence the health and well-being of our communities, and many entities and individuals have a role to play in responding to community health needs and shaping community health priorities. Fundamental to all of these efforts is the need for effective population-based health data.

In its groundbreaking 1988 study, *The Future of Public Health*, the Institute of Medicine listed health assessment first among three core functions for public health agencies at all levels of government. The Institute's Committee for the Study of Public Health recommended that *every public health agency regularly and systematically collect, assemble, analyze, and make available information on the health of the community, including statistics on health status, community health needs, and epidemiologic and other studies of health problems*.

The goal of community health assessment is to provide practitioners, public health officials and community members with informational tools necessary to support the development of innovative programs and improved practices in public and community health. In recent years, the New York City Department of Health has made community health assessment a priority. Building on the borough-wide health profiles first produced in collaboration with the Turning Point Initiative and the New York City Public Health Partnership, the Department recently issued the *Citywide Community Health Profile: Age Group Perspective, 1987-1997*, the first in a series of citywide community health reports. With *New York City Neighborhood Health Profiles: Manhattan, 2000* the Department continues the process of providing health information at the neighborhood level for all of New York City. The Manhattan profile together with the other borough reports will highlight the health status of all of the city's United Hospital Fund (UHF) neighborhoods, comparing each community to the city as a whole. An important feature of these documents is the integration of disparate data collected by the Department and several New York State health agencies. This new community-focused data presentation is designed to foster partnerships with physicians, community leaders, and other concerned community members. The Department is committed to engaging a broad spectrum of constituencies, and to building and sustaining capacity for the assessment, reporting and maintenance of community health and well-being.

Organization

New York City Neighborhood Health Profiles: Manhattan, 2000 is divided into two sections:

The first section presents the health profile of the entire borough of Manhattan, comparing it to New York City as a whole. This borough-wide snapshot serves as a point of reference for the individual neighborhood reports that follow, and describes in detail the five component parts that make up each community health profile (see below). The second section presents the health profiles of each of the borough's eleven United Health Fund (UHF) neighborhoods. Once again, the health status of each community is compared to New York City as a whole.

Each profile consists of five components that together provide a picture of each community's health. The five components are: *Demographics and Vital Statistics Related to Birth*, *Selected Reportable Conditions, Selected Cancer Statistics, Leading Causes of Hospitalization,* and *Leading Causes of Death.*

The charts presented in the borough and community profiles excerpt highlights from the complete health tables that appear in Appendix F.

Methodology

This report brings together information from several sources including New York City Department of Health Programs: Communicable Disease, HIV/AIDS Surveillance, Sexually Transmitted Disease (STD) Control, Tuberculosis Control, Lead Poisoning Prevention, Office of Vital Statistics; and the New York State Department of Health Statewide Planning and Resource Cooperative Systems (SPARCS) and Cancer Registry. Population estimates, age distributions, and distributions by race and ethnicity are from the 2000 U.S. Census. Information on socioeconomic characteristics such as poverty, education, and linguistically isolated households is taken from the 1990 census. 2000 census data on these socioeconomic characteristics are not yet available.

Population data
The population of New York and its boroughs' residents used in this report is based on the United Hospital Fund (UHF) neighborhood definitions as of October 1998 (see Appendix C for a list of UHF neighborhoods and their associated ZIP codes). United Hospital Fund neighborhoods, which are an aggregate of zip codes, were selected as the best choice among a number of neighborhood designations available.

Cancer data
Cancer incidence data are from the New York State Department of Health Cancer Registry. In this report, annual incidence rates are provided for each of five selected cancers, expressed as an average yearly rate based on data compiled over five years (1992-1996). At the time this document was prepared, 1996 was the most recent year for which complete cancer data were available.

Hospitalization data
Hospitalization inpatient data for New York City were obtained through SPARCS (Statewide Plan-ning and Research Cooperative System). The diagnostic groupings were defined from a principal diagnosis based on the International Classification of Diseases, 9th Revision, Clinical Modification (ICD-9-CM) (see Appendix E). In the borough-wide profile the 7 leading causes of hospitalization are shown, and for each neighborhood the 5 leading causes are shown (complete data presented in Appendix F).

Cause of death data
Cause of death data were obtained from the NYC Department of Health Office of Vital Statistics, which codes underlying causes of death. In the borough-wide profile the 7 leading causes of death are shown, and for each UHF neighborhood the 5 leading causes are shown (complete data presented in Appendix F).

AIDS data

For this report, an AIDS case is defined as an individual diagnosed with AIDS during the year 2000. The case numbers represent cases reported as of August 1, 2001. Total numbers of AIDS cases for the year 2000 may change in subsequent reports, as new information continues to be received. Effective January 1, 1993, the Centers for Disease Control and Prevention expanded the AIDS surveillance case definition to include all HIV-infected persons who have <200 CD4+ T-lympho-cytes/microL (<14%); pulmonary tuberculosis; recurrent pneumonia; or invasive cervical cancer. The effect of this expansion should be noted when comparing cases diagnosed before and after 1993.

Lead poisoning data

Lead poisoning data are presented for children less than six years of age, which is the age group at greatest risk for lead poisoning and the targeted age group for lead poisoning prevention, including blood lead screening. New York State law requires medical providers to test children at ages 1 and 2 and to assess the need for a lead test in all children aged 6 months to less than 6 years of age.

Rates and Ratios

Most health data in this report are presented in the form of a rate. A rate is the number of health events within a given time period (usually one year) in a population or population subgroup divided by the number of people in that population or population subgroup. The health rates in Manhattan and its neighborhoods are compared to the comparable New York City rates, using a ratio. To calcu-late the ratio, the Manhattan rate is divided by the New York City rate. If the rate in Manhattan is higher, the ratio is greater than 1. If the rate is lower, the ratio is less than 1.

Differences in rates (see Appendix B) between Manhattan and New York City and between the UHF neighborhoods and New York City are described as follows: differences greater than 50% are termed "substantially higher/ substantially lower"; differences of 10-50% are termed "somewhat higher/ somewhat lower"; differences of 5-9% are termed "slightly higher/ slightly lower"; and differences of less than 5% are termed "nearly identical".

In the Manhattan Borough Health Profile and the Neighborhood Health Profiles there are narrative sections that highlight particular findings. However, it is important to note that all the health infor-mation presented in the Profile section charts and the (more exhaustive) Appendix F tables is impor-tant. For complete information, readers should consult these listings. In choosing which aspects of borough or neighborhood health to highlight in the narrative sections, both the individual condition's overall health importance and the degree to which its rate differed from the New York City rate are considered. In general, any rate in Manhattan or one of its UHF neighborhoods that is substantially higher or lower than the corresponding rate in New York City is highlighted, with the exception of some conditions with very low case rates (because low case rates can vary considerably from year to year). Many rates that are moderately higher or lower are also highlighted.

In this document, New York City rates are used as a benchmark of comparison. Such a comparison is valid, because data collection methods are the same throughout the city. Comparison of neighbor-hood rates to New York City rates is useful for setting health priorities in a community and allocating resources for particular problems. For example, HIV prevention funds are allocated to neighbor-

numbers of AIDS cases. New York City rates, however, do not necessarily represent optimum health standards. National and international health statistics can also provide relevant and useful reference points. Standards are available in other publications. For example, *Healthy People 2010* presents the goals for heath improvement of the US Public Health Service. Neighborhood health rates can also be compared to these national or international standards.

HIGHLIGHTS

Demographics and Vital Statistics Related to Birth

The neighborhoods of Manhattan display a wide range of racial and ethnic diversity. For the borough as a whole, the percent of the population that is white is somewhat higher than in New York City overall (46% vs. 34%), and the percentage that is African-American is somewhat lower (15% vs. 25%). The percentage that is Hispanic (27%) is identical to New York City, and the percentage that is Asian is slightly lower (9% vs. 10%). On the Upper East Side 82% of the population is white, in Washington Heights-Inwood 71% of the population is Hispanic, and in Central Harlem-Morningside Heights 67% of the population is African-American. The percent of persons living in poverty, similar in Manhattan as a whole than in New York City overall (20% vs. 19%), varies from 5.6% on the Upper East Side to 39% in East Harlem. The percent of adults aged 25 and older without a high school diploma varies from 7.1% in Gramercy Park-Murray Hill to 51% in East Harlem. The percentage of linguistically isolated households varies from 3.4% on the Upper East Side to 27% in Washington Heights-Inwood.

The infant mortality rate in Manhattan is somewhat lower than in New York City overall (5.0 vs. 6.7 deaths before age 1 year per 1,000 live births), and varies from 1.7 in Gramercy Park-Murray Hill to 11 in Lower Manhattan. The percent of births to women aged less than 20 years varies from 0.9% in Gramercy Park-Murray Hill to 16% in East Harlem.

Selected Reportable Conditions

The rate of lead poisoning in Manhattan as a whole is somewhat lower than in New York City overall (65 vs. 104 per 100,000 children less than 6 years). In the neighborhoods the rate varies from 8.8/100,000 on the Upper East Side to 96/100,000 in East Harlem. Rates of chlamydia infection in women vary from 130 per 100,000 women on the Upper East Side to 1,150/100,000 in Central Harlem-Morningside Heights. Rates of gonorrhea vary from 34 per 100,000 population on the Upper East Side to 452/100,000 in Central Harlem-Morningside Heights. The rate of primary and secondary syphilis in Manhattan as a whole is substantially higher than in New York overall (4.1 vs. 1.5/100,000), and varies from 0.0 in Gramercy Park-Murray Hill to 7.3/100,000 in Central Harlem-Morningside Heights. The rate of AIDS cases is substantially higher in Manhattan than in New York City (98 vs. 55/100,000). The AIDS case rate varies from 41/100,000 in Lower Manhattan to 167/100,000 in Chelsea-Clinton. Tuberculosis rates in Manhattan vary from 8.3/100,000 on the Upper East Side to 28/100,000 in Central Harlem-Morningside Heights and East Harlem. Rates for the remaining selected reportable communicable diseases vary considerably among neighborhoods. It is important to note that rates for rare conditions can fluctuate considerably from year to year, especially when considering small geographic areas.

Selected Cancer Statistics

Average yearly rates for lung cancer in adults aged 25 to 64 years and adults aged 65 years and older, colorectal cancer in adults aged 25 to 64 and adults aged 65 and older, breast cancer in women aged 25 to 64 and women aged 65 and older, and prostate cancer in men aged 25 to 64 and men aged 65 and older in Manhattan (1992-1996) in general do not differ substantially from the comparable rates for New York City overall. However, in Central Harlem-Morningside Heights, the rate of lung cancer among adults aged 45 to 64 is substantially higher than in New York City overall (135 vs. 82/100,000). The rate of colorectal cancer among adults aged 45 to 64 in East Harlem is somewhat higher than in New York City overall (83 vs. 57/100,000). The rate of breast cancer among women aged 45 to 64 on the Upper East Side is substantially higher than in New York City as a whole (320 vs. 200/100,000). The rates of prostate cancer in men aged 45 to 64 are somewhat higher in Washington Heights-Inwood (183 vs.130/100,000) and Gramercy Park-Murray Hill (185 vs. 130/100,000) than in New York City overall, and the rate in men aged 65 and older is somewhat higher in Washington Heights-Inwood (1,170 vs. 805/100,000). 7

Leading Causes of Hospitalization

The leading causes of hospitalization in Manhattan and its neighborhoods in 2000 for the various age groups (children aged 9 years and younger; adolescents aged 10 to 17; adults aged 18 to 24; adults aged 25 to 64; adults aged 65 and older) were similar to the leading causes of hospitalization for New York City overall. For children aged 9 and younger, asthma remains the leading cause of hospitalization. The rate of hospitalization for asthma in children aged 9 and younger varies from 201/100,000 on the Upper East Side to 1,938/100,000 in East Harlem. Among adolescents aged 10 to 17, pregnancy and related conditions is the leading cause of hospitalization in most neighborhoods. Its rate varies from 66/100,000 in Gramercy Park-Murray Hill (where it is the fourth leading cause) to 2,029/100,000 in East Harlem. Pregnancy and related conditions is also the leading cause of hospitalization among adults aged 18 to 24 and adults aged 25 to 64, except in Gramercy Park-Murray Hill, where mental disorders is the leading cause of hospitalization in adults aged 18 to 24. For adults aged 65 and older, other heart diseases, injuries and poisonings, and ischemic heart disease are the leading causes of hospitalization. The rates of hospitalization for these causes in Manhattan and its neighborhoods do not differ substantially from the rates in New York City overall.

Leading Causes of Death

Malignant neoplasms and heart diseases are the leading causes of death for adults aged 25 to 64 in Manhattan as a whole and all its neighborhoods, except in Chelsea-Clinton and Union Square-Lower East Side, where HIV infection is the second leading cause. The death rates from malignant neoplasms for this age group in Central Harlem-Morningside Heights (147/100,000) and East Harlem (147/100,000) are substantially higher than in New York City overall (91/100,000). The death rates from HIV infection for adults aged 25 to 64 in Central Harlem-Morningside Heights (100), East Harlem (124), Chelsea-Clinton (63) and Union Square-Lower East Side (75) are substantially higher than in New York City overall (41/100,000). Among adults aged 65 and older, diseases of the heart and malignant neoplasms are the first and second leading causes of death, respectively, in Manhattan and all its neighborhoods. Throughout Manhattan, the rates for these two causes do not differ substantially from the rates in New York City overall.

MANHATTAN
HEALTH PROFILE

MANHATTAN HEALTH PROFILE

Demographics and Vital Statistics Related to Birth

The demographics section presents basic vital statistics (fertility and death rates), population distribution by age and race/ethnicity, selected socioeconomic factors (percent of persons living in poverty, percent of adults without a high school diploma, percent of linguistically isolated households), and important pregnancy and childbirth statistics (infant mortality rate, percent of low birth weight babies, percent of pregnant women receiving first trimester prenatal care, percent of births to women less than 20 years old). Each of these parameters serves as an important health indicator: disease patterns and death rates vary by age, socioeconomic conditions are important predictors of health, and infant birth-weight and mortality statistics represent inherent measures of the health status of a community. In addition, demographic and socioeconomic data are fundamental to health planning and resource allocation.

The population of Manhattan in 2000 was 1,537,195, or 19% of the total population of New York City. In Manhattan, the percentage of the population that is white (46%) is somewhat higher than in New York City as a whole (34%), while the percentage that is African-American is somewhat lower (15% vs. 25%). The percentage of the population that is Asian is somewhat lower (9% vs.10%) and the percentage that is Hispanic is identical (27%). The fertility rate in Manhattan in 2000 was somewhat lower than in New York City overall. The percent of adults aged 25 and older without a high school diploma in Manhattan (25%) was somewhat lower than in New York City as a whole (32%). The percent of the population in Manhattan aged less than 25 years (27%) was somewhat lower than in the city overall (34%).
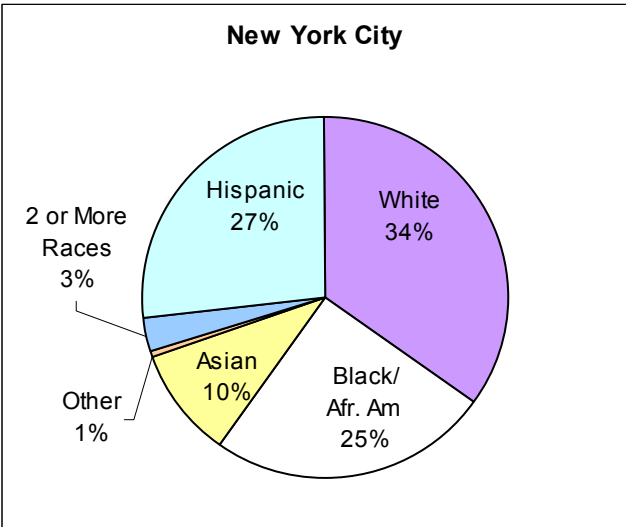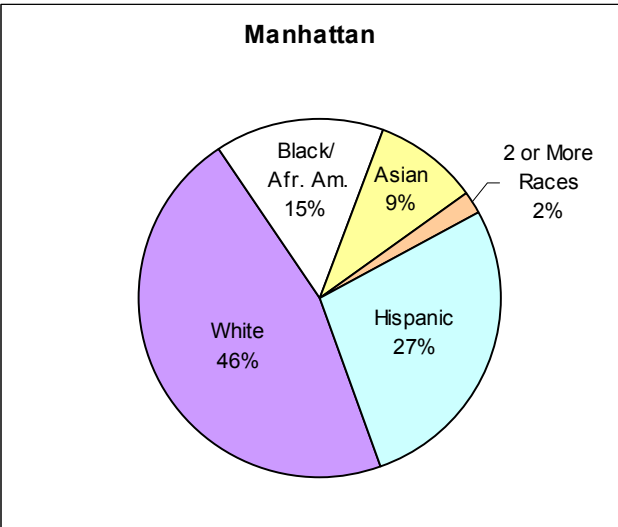
The infant mortality rate (IMR: the number of deaths in infants less than 1 year of age per 1,000 live births) was somewhat lower in Manhattan in 2000 (5.0) than in New York City overall. New York City's infant mortality rate has decreased over the past decade from 11.6 in 1990 to 6.7 in 2000, exceeding the Healthy People 2000 objective of 7.0. Although the IMRs in 2000 in both Manhattan and New York City were lower than the national rate of 6.9, IMRs for certain geographic areas of the city and among particular racial/ethnic groups are still much higher than national and overall New York City rates. Infants born to African-American mothers, for example, have an IMR twice as high as infants born to white mothers. Disparities in IMR can be reduced by promoting preconception healthcare, pregnancy planning, taking folic acid prior to and during early pregnancy, initiating prenatal care in the first trimester of pregnancy, smoking cessation, proper nutrition during pregnancy, placing infants on their backs to sleep, and breastfeeding. The percent of births to women less than 20 years old was somewhat lower in Manhattan (7.7%) than in New York City overall (8.6%), and the percent of women receiving first trimester prenatal care was somewhat higher (68% vs. 60%).

Demographic Characteristics and Vital Statistics Related to Birth

Manhattan Compared to New York City, 2000

	Manhattan	New York City
Total Population	1,537,195	8,008,278
Age-adjusted death rate (deaths per 100,000)	713	737
Fertility rate (births per 1,000 women aged 15 to 44)	50	66
Infant Mortality rate (deaths before age 1 year per 1,000 live births)	5.0	6.7
Percent of births to women less than 20 years old	7.7	8.6
Percent of women receiving first trimester prenatal care	68	60
Percent low birth weight babies (percent of live births <2500 grams)	7.8	8.3
Percent of persons living in poverty*	20	19
Percent of adults aged 25 and older without a high school diploma*	25	32
Percent of linguistically isolated households*	11	12
Percent of population less than 25 years old	27	34
Percent of population greater than or equal to 65 years old	12	12

*Based on 1990 Census

Population by Race/Ethnicity

Manhattan Compared to New York City, 2000

Manhattan: White 46%, Black/Afr. Am. 15%, Asian 9%, 2 or More Races 2%, Hispanic 27%

New York City: White 34%, Black/Afr. Am 25%, Asian 10%, Other 1%, 2 or More Races 3%, Hispanic 27%

Selected Reportable Conditions

This section presents data on lead poisoning in children, sexually transmitted diseases (STDs), the acquired immunodeficiency syndrome (AIDS), tuberculosis, and other important communicable diseases.

Lead poisoning in children can cause mental retardation and selective deficits in language, cognitive function, behavior, and school performance. Since the elimination of lead from vehicular emissions, the major source of lead exposure for children in the U.S. is lead-based paint present in older dwellings. Childhood lead poisoning remains a serious problem in New York City because of the age and condition of its housing. Approximately 71% of the city's estimated total housing units were built before 1960, the year that New York began prohibiting the use of lead-based paint, while in Manhattan, approximately 69% of housing units were built before 1960. In Manhattan, the rate of lead poisoning in 2000 in children aged less than 6 years was somewhat lower than in New York City as a whole (65 vs. 104 per 100,000 children aged 0-5 years).

Chlamydia, gonorrhea and syphilis are among the bacterial STDs monitored by the New York City Department of Health. These infections begin at the site of sexual contact: the genitalia, the oral cavity, or the anus. They can be prevented with correct and consistent use of barrier protection devices (such as male or female condoms) during each sexual act. Without timely diagnosis and treatment, each condition can result in specific negative long-term consequences. In addition, the presence of each of these pathogens facilitates the transmission of HIV.

Chlamydia is the most commonly reported STD in both New York City and the U.S. Frequently, there are no presenting symptoms. Infection may be present, but clinically silent, with subclinical inflammation along the reproductive tract or other exposed mucous membranes (anus or oral cavity). Young women are more susceptible to infection. Untreated chlamydia infection can cause pelvic inflammatory disease, life-threatening ectopic pregnancy, and infertility. It can also cause adverse outcomes of pregnancy (affecting the newborn child) including pneumonia and eye disease. Screening programs are an important component of disease control and adverse outcome prevention. Relatively few cases are reported among men, reflecting historically cumbersome testing technologies that require urethral specimen collection (an uncomfortable process for detection of an infection that often has no symptoms). The latest testing technology utilizes a urine specimen; as it becomes more widely used there will likely be more reports of documented infections among men. Because men have up to now been tested infrequently, in this document chlamydia is reported for women only. The rate of chlamydia among women in Manhattan in 2000 was slightly higher than in New York City overall (563 vs. 538/100,000)

Like chlamydia, sexually-transmitted gonorrhea also causes inflammation at the site of infection (reproductive tract, rectum and oral cavity). In contrast to chlamydia, a larger proportion of cases have symptoms, usually a discharge. Untreated infection can have negative outcomes similar to those of chlamydia. The rate of gonorrhea among residents of Manhattan in 2000 was somewhat higher than in New York City overall (174 vs. 146/100,000).

Untreated syphilis infection is a chronic disease that progresses through brief symptomatic phases, or stages. Usually, approximately 3 weeks after initially contracting infection an infected individual develops a single large, but painless, ulcer. It often occurs on the genitalia but as with other sexually transmitted bacteria can affect the oral cavity, the anus, or any other site of sexual contact. The ulcer (referred to as the primary

stage of disease) lasts approximately 3 weeks and resolves even in the absence of treatment. The risk of concomitant HIV transmission is increased up to 5-fold during this ulcerative phase. Approximately 4 weeks after resolution of the ulcer the infected person will manifest body-wide symptoms such as rashes and hair loss (secondary stage disease). These also disappear, even in the absence of treatment. The disease then progresses silently, during which time diagnosis is possible via a blood test, and over the course of months to years the infected person can develop neurologic and cardiovascular involvement. Additionally, syphilis infection in the pregnant woman can result in a newborn with syphilis infection, mental retardation, musculoskeletal deformities, blindness, or deafness. Syphilis during pregnancy can also result in stillbirth. The New York City Department of Health monitors all stages of syphilis infection. However, primary and secondary syphilis are monitored as a single entity since they are the most highly infectious stages. The rate of primary and secondary syphilis among Manhattan residents in 2000 was substantially higher than in New York City overall (4.1 vs. 1.5/100,000).

Over the last several years, AIDS case rates have declined, due in part to a delay in the progression of HIV infection to AIDS as a result of the broad use of highly active antiretroviral therapy in persons infected with HIV. Such therapy maintains a state of health, including delaying the development of severe suppression of the immune system that occurs when a person develops AIDS. While antiretroviral therapy can delay the onset of full-blown AIDS, there is no evidence that it can prevent infected persons from transmitting HIV infection. Prevention efforts continue to be essential to control and reduce the rate of new HIV infections in at-risk populations. The AIDS case rate in Manhattan residents in 2000 was substantially higher than the overall New York City case rate (98 vs. 55/100,000). Differing AIDS case rates are usually a reflection of the contrasting socioeconomic and risk factor profiles of different populations.

After a marked resurgence from 1986 to 1992, New York City has experienced a gradual decline in the number of tuberculosis (*M. tuberculosis*) cases. Improved case management and infection control, particularly through directly observed therapy (DOT), have contributed to the reduction in case rates. However, the tuberculosis case rate in NYC is still higher than for the nation as a whole, attributable in part to the city's high (compared to the nation) AIDS case rate and its large number of immigrants from countries with high rates of tuberculosis. The tuberculosis case rate in Manhattan residents in 2000 was slightly higher than in New York City as a whole (18 vs. 17/100,000).

Hepatitis B is caused by a virus and is spread by contact with blood or other body fluids of an infected person, usually by sexual contact or sharing needles, razors, toothbrushes, or any object contaminated with blood or body fluids. Most adults with hepatitis B recover completely, but some infections persist; over time, chronic liver disease can result. The rate of hepatitis B infection in Manhattan residents in 2000 was substantially higher than the overall New York City rate (11 vs. 7.1/100,000).

Malaria is caused by the Plasmodium parasite and is transmitted by the bite of an infected mosquito. Malaria occurs in New York City residents who travel to endemic areas such as Africa, Asia, and Central and South America. Health care providers can help prevent malaria by educating their patients about the need for prophylactic treatment when traveling to countries where malaria is endemic. The rate of malaria infection in Manhattan residents in 2000 was identical to the overall New York City rate (2.8/100,000).

West Nile virus first appeared in the western hemisphere in northern Queens in the summer of 1999. It has since become established in the New York City metropolitan area and has spread throughout much of the eastern United States. In 2000, there was only one human case of West Nile viral disease in Manhattan. Each summer and fall, the New York City Department of Health works with communities to do everything possible to reduce mosquito populations and prevent West Nile virus infections: these measures include working with the public to reduce standing water where mosquitoes can breed, using larvicides to prevent the emergence of adult mosquitoes, monitoring and testing dead birds, and trapping mosquitoes to test for and detect the presence of West Nile virus in the city.

Lyme disease is caused by a bacteria, *Borrelia burgdorferi*, and is transmitted by the bite of an infected blacklegged tick. Most cases among NYC residents are acquired outside of New York City. Blacklegged ticks have very rarely been found in NYC, but they are found in Nassau, Suffolk, and Westchester counties on the NYC border. To avoid getting Lyme disease, it is important to wear light-colored clothing when outdoors in areas where ticks can be found, such as wooded parks; to tuck pants into socks; to wear an insecticide containing DEET; and to check frequently for ticks and remove any that are found. The rate of cases of Lyme disease in Manhattan residents in 2000 was substantially higher than in New York City overall (7.9 vs. 2.6/100,000). No cases of locally-acquired Lyme disease were identified from Manhattan in 2000. No blacklegged ticks were found during tick surveillance in Manhattan from 1998-2001.

Listeriosis, caused by the bacteria *Listeria monocytogenes*, is found everywhere in the environment, but most illness is caused by eating contaminated foods. The elderly, pregnant women, and people with weakened immune systems caused by cancer treatments, AIDS, diabetes, or kidney disease are at high risk for listeriosis. Listeriosis is fatal in 20% of cases. Listeriosis can be prevented by thoroughly cooking raw food from animal sources, thoroughly washing raw vegetables, and keeping uncooked meats separate from ready-to-eat foods. Persons at increased risk should consider avoiding consumption of ready-to-eat foods such as deli meat or hotdogs unless thoroughly cooked; refrigerated pate or meat spreads; raw (unpasteurized) milk or juice; and soft cheeses such as Brie, Camembert, blue-veined, and Mexican-style cheese. Hard cheeses, processed cheeses, cream cheese, and yogurt do not pose a risk. The rate of listeriosis in Manhattan residents in 2000 was identical to the overall New York City rate (0.6/100,000).

Salmonellosis, caused by s*almonella* bacteria, is a common bacterial illness characterized by diarrhea, fever, and abdominal cramps that develop 12 to 72 hours after infection and last 5-7 days. The elderly, infants, and those with impaired immune systems are more likely to have severe illness. Salmonellosis is spread by eating or drinking contaminated food or water, or by direct contact with infected people or animals. The bacteria is often found in raw meat, eggs, unpasteurized milk, and cheese products.

Campylobacteriosis, caused by *campylobacter* bacteria, is another common cause of food-related illness. Major symptoms include diarrhea, cramps, fever, and vomiting that develop 2 to 5 days after infection. In persons with compromised immune symptoms, illness can be more severe. Campylobacteriosis is spread by drinking or eating contaminated water or foods, especially undercooked poultry or pork, or by contact with infected animals.

Yersiniosis is caused by the bacteria *Yersinia enterocolitica* or *Yersinia pseudotuberculosis.* Anyone can get yersiniosis, but infection is more common in young children. Symptoms include fever, abdominal pain, and diarrhea, which is often bloody, beginning 4 to 7 days after exposure and continuing 1 to 3 weeks or longer. In older children and adults, right-sided abdominal pain and fever may be the predominant symptoms, and may be confused with appendicitis. Yersiniosis is spread by contaminated water or food, often raw pork and pork products, or from infected people or animals.

The rates for yersiniosis and salmonellosis in Manhattan residents in 2000 were identical to (salmonellosis) or somewhat lower than (yersiniosis) the overall New York City rates, and the rate for campylobacteriosis was somewhat higher (16 vs. 10.8/100,000). These infections can be prevented by avoiding foods with raw or undercooked eggs; avoiding raw (unpasteurized milk); avoiding undercooked meats; handling raw poultry, beef, and pork carefully; wrapping fresh meats in plastic bags at the market to prevent blood from dripping on other foods; refrigerating foods promptly, cleaning cutting boards and counters used for preparation immediately; and ensuring that meat reaches the correct internal cooking temperatures.

Shigellosis, caused by the *Shigella* group of bacteria, is characterized by diarrhea (often bloody), fever, and stomach cramps starting 1-2 days after exposure, and usually resolving in 5 to 7 days. In the elderly and young children, illness can be severe and require hospitalization. Shigellosis is spread by eating or drinking contaminated food or water, or by direct contact with an infected person. Sexual practices that allow oral-anal contact may result in spread. The best ways to prevent shigellosis are through hand washing and avoidance of sexual practices that may result in contact with stool. The rate of shigellosis in Manhattan residents in 2000 was somewhat lower than for New York City overall (10.4 vs. 12/100,000).

Typhoid fever is caused by the bacteria *Salmonella typhi*. The major symptoms include sustained fever, headache, constipation or diarrhea, rose-colored spots on the trunk, and an enlarged spleen or liver. Typhoid is spread by eating or drinking water or foods contaminated by stool (feces) from an infected person. Anyone can get typhoid, but the greatest risk is to travelers visiting countries where the disease is common. Over the past 10 years, travelers from the United States to Asia, Africa, and Latin America have been especially at risk. A vaccine is available for people traveling to developing countries where exposure may occur, but it is not completely effective. In 2000, the rate of typhoid fever in Manhattan residents was somewhat lower than for New York City overall (0.5 vs. 0.7/ 100,000).

Hepatitis A is a liver disease caused by the hepatitis A virus. Symptoms appear 2 to 6 weeks after exposure and may include fatigue, poor appetite, fever, vomiting, dark-colored urine, and jaundice (yellowing of the skin and whites of the eyes). Once a person recovers from hepatitis A, he or she is immune for life and does not continue to carry the virus. Anyone can get hepatitis A, but it occurs more frequently in children and in men who have sex with men. The hepatitis A vaccine is very effective and is recommended for people traveling to developing countries, men who have sex with men, people with chronic liver disease, injecting drug users, people living in communities with high hepatitis A rates, and in certain outbreak settings. Avoiding sexual practices that result in hand or mouth contact with stool will reduce the risk of hepatitis A. The rate of hepatitis A infection in Manhattan residents in 2000 was substantially higher than in New York City overall (13 vs. 6.7/ 100,000).

Both typhoid fever and hepatitis A can be prevented by strict attention to food and water precautions when traveling to developing countries. Travelers should boil water before drinking or drink bottled water, ask for drinks with no ice or use ice made from boiled water, eat foods that have been thoroughly cooked, avoid raw fruits and vegetables that cannot be peeled, such as lettuce, and avoid foods and beverages from street vendors.

Cryptosporidiosis is a diarrheal disease caused by the parasite *Cryptosporidium parvum*. Although anyone can contract cryptosporidiosis, infections are most severe in persons with HIV or AIDS. The major symptoms are watery diarrhea and abdominal cramping, which last 1-2 weeks in persons with healthy immune systems. In persons with HIV/AIDS, illness may be prolonged. There is no effective treatment. Cryptosporidiosis can be prevented by thorough hand washing before handling food or after using the toilet or changing diapers, avoiding drinking water directly from streams and lakes, and avoiding sexual practices that include oral-anal contact. In Manattan residents, the rate of cryptosporidiosis in 2000 was substantially higher than in New York City overall (5.5 vs. 2.1/ 100,000).

Giardiasis is a diarrheal disease caused by the parasite *Giardia lamblia*. The major symptoms are diarrhea, abdominal cramps and bloating. Anyone can get giardiasis, although it occurs more often in people who live in institutional settings or attend day care centers, and among foreign travelers and individuals who drink from lakes, rivers and streams. Men who have sex with men are also at increased risk. Giardiasis is treated with antibiotics. Giardiasis can be prevented by thorough hand washing before handling food or after using the toilet or changing diapers, by avoiding drinking water directly from streams and lakes, and by avoiding sexual practices that include oral-anal contact. The rate of giardiasis in Manhattan residents in 2000 was substantially higher than in New York City overall (58 vs. 22/100,000).

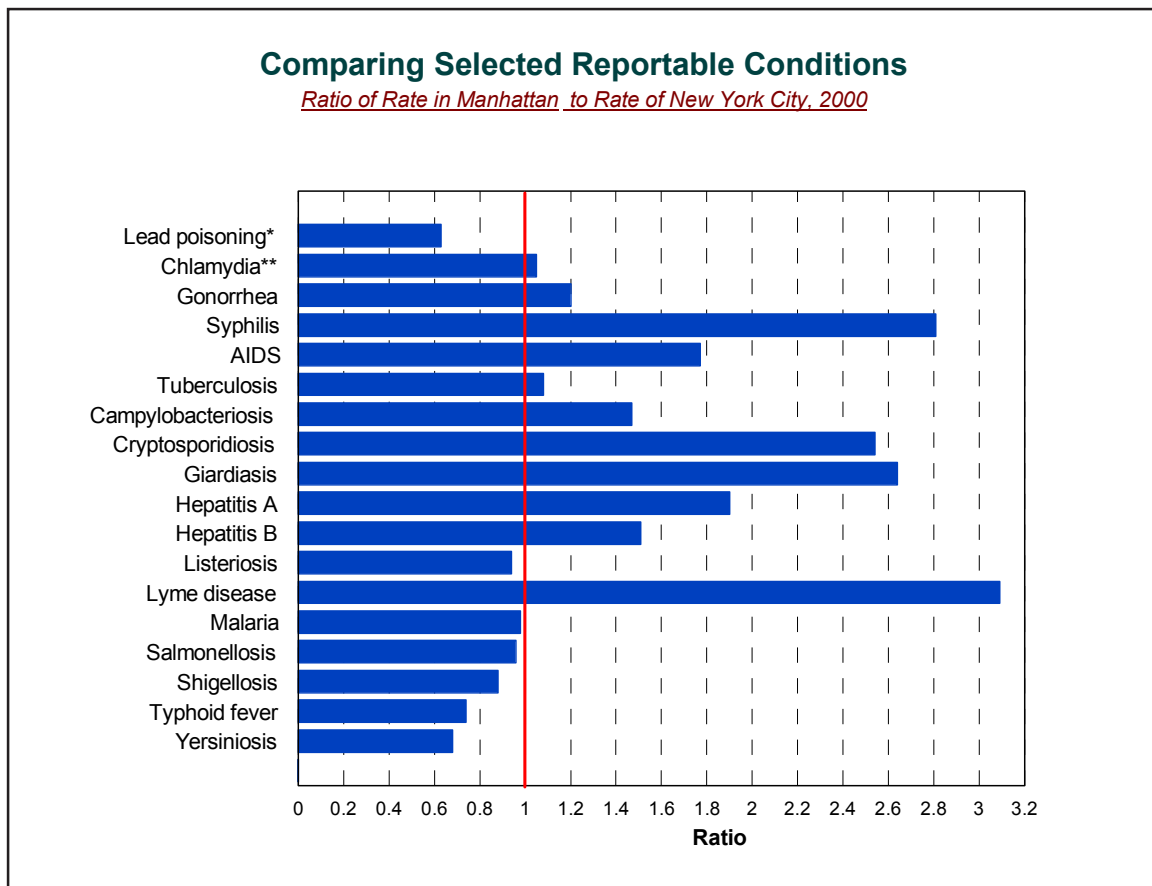# Selected Reportable Conditions for Manhattan, 2000

	Manhattan No. of Cases	Manhattan Rate/100,000	New York City Rate/100,000
Lead poisoning*	59	65	104
Chlamydia**	4,544	563	538
Gonorrhea	2,677	174	146
Syphilis	63	4.1	1.5
AIDS	1,503	98	55
Tuberculosis	276	18	17
Campylobacteriosis	245	16	10.8
Cryptosporidiosis	84	5.5	2.1
Giardiasis	898	58	22
Hepatitis A	195	13	6.7
Hepatitis B	164	11	7.1
Listeriosis	9	0.6	0.6
Lyme disease	122	7.9	2.6
Malaria	43	2.8	2.8
Salmonellosis	223	15	15
Shigellosis	160	10.4	12
Typhoid fever	8	0.5	0.7
Yersiniosis	3	0.2	0.3

Comparing Selected Reportable Conditions
Ratio of Rate in Manhattan to Rate of New York City, 2000

* Children ages 0 - 5 years old.
** Female cases only; rate per 100,000 women.

Selected Cancer Statistics

Cancer is the second leading cause of death, after heart disease, in the United States as well as in New York City.

Lung cancer is the leading cause of cancer deaths in the U.S. for both men and women. In 1987, death rates for lung cancer in women surpassed those for breast cancer in women. There is strong evidence that cigarette smoking causes lung cancer and that smoking avoidance and cessation are the most important measures in decreasing mortality from the disease. Evidence for the benefit of reduced tobacco consumption is seen nationally in the decline in the overall age-adjusted rates of lung cancer for men since the mid-1980's and more recently for women less than 60 years of age. The average yearly lung cancer rates (1992-1996) for adults in Manhattan aged 45 to 64 (89 vs. 82 per 100,000 population) and for adults aged 65 and older (301 vs. 280/100,000) were slightly higher than in New York City overall.
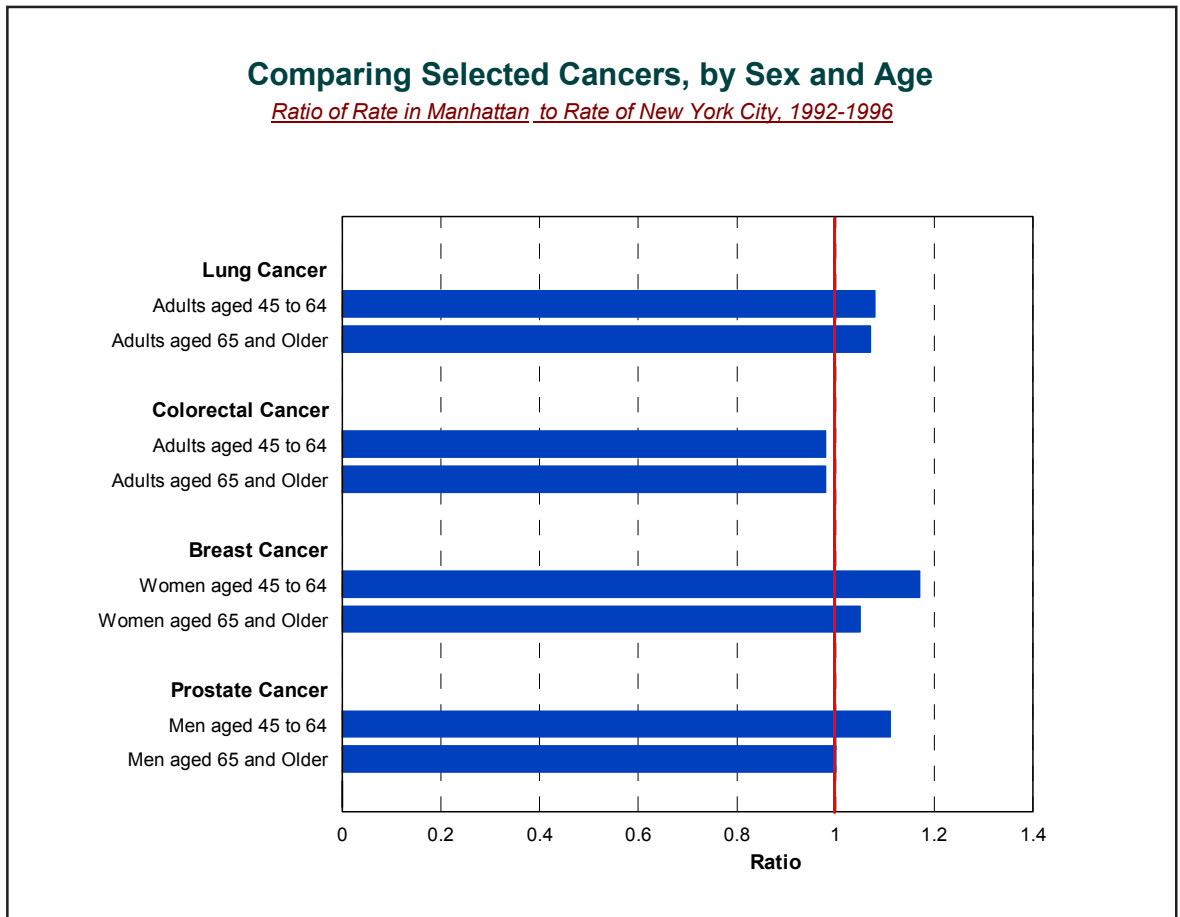
Colorectal cancer is the second most common cause of cancer deaths. Approximately 135,000 new cases and 56,000 deaths are expected in the U.S. in 2001. Evidence suggests that cigarette smoking and a diet high in total fat, meat, calories and alcohol are associated with an increased risk of colon cancer. Studies indicate that an increased intake of fruits and vegetables and moderate exercise can help protect against the disease. The average yearly rates of colorectal cancer (1992-1996) for adults in Manhattan aged 45 to 64 and adults aged 65 and older were nearly identical to the comparable New York City rates.

Approximately 192,000 cases of breast cancer with 42,000 deaths are expected in the U.S. in 2001, according to American Cancer Society estimates. Breast malignancy is second only to lung cancer as a cause of cancer deaths in women. Early detection with effective treatment has reduced mortality in some groups of women with breast cancer, and efforts to develop primary prevention strategies continue. Studies suggest that moderate exercise and a healthy diet low in fat may help protect against the disease. The average yearly breast cancer rate in Manhattan (1992-1996) for women aged 45 to 64 years was somewhat higher than the rate in New York City overall (234 vs. 200/100,000), and the rate for women in Manhattan aged 65 years and older was slightly higher (390 vs. 373/ 100,000). The rate in Manhattan for women aged 65 years and older was higher than for women aged 45-64, consistent with the age-related increase in breast cancer seen nationally.

Prostate cancer is the most common cancer in the U. S. among men. The widespread use of the PSA (prostate-specific antigen) screening test, beginning in the early 1990's, led to a dramatic increase in the number of new cases identified; more recently the new case rate has leveled off. The risk for prostate cancer is higher among African-Americans, and survival rates while high overall are lower for African-American men than whites at comparable stages of disease. The average yearly rate of prostate cancer among men in Manhattan 1992-1996) aged 45 to 64 was somewhat higher than in New York City overall (144 vs. 130/100,000), and for men aged 65 years and older the rate was identical (805/100,000).

Selected Cancers by Sex and Age for Manhattan, 1992-1996

	Manhattan No. of Cases	Manhattan Avg. Yearly Rate/100,000	New York City Avg. Yearly Rate/100,000
Lung Cancer			
Adults aged 45 to 64	1,541	89	82
Adults aged 65 and Older	2,809	301	280
Colorectal Cancer			
Adults aged 45 to 64	973	56	57
Adults aged 65 and Older	2,866	307	313
Breast Cancer			
Women aged 45 to 64	2,180	234	200
Women aged 65 and Older	2,218	390	373
Prostate Cancer			
Men aged 45 to 64	1,161	144	130
Men aged 65 and Older	2,939	805	805

Comparing Selected Cancers, by Sex and Age

Ratio of Rate in Manhattan to Rate of New York City, 1992-1996

Lung Cancer
Adults aged 45 to 64
Adults aged 65 and Older

Colorectal Cancer
Adults aged 45 to 64
Adults aged 65 and Older

Breast Cancer
Women aged 45 to 64
Women aged 65 and Older

Prostate Cancer
Men aged 45 to 64
Men aged 65 and Older

0   0.2   0.4   0.6   0.8   1   1.2   1.4

Ratio

Leading Causes of Hospitalization

Hospitalization data yield important information about community health, different from but complementary to vital statistics and disease surveillance and reporting. Causes of hospitalization reflect the overall health of a community and help define community health needs (for example, the need for infectious disease surveillance and prevention, mental health interventions, measures to address the burden of chronic disease, and addiction treatment).

Certain causes of hospitalization (causes of hospitalizations are defined in Appendix E) such as asthma, mental disorders and addiction, which are all more prevalent in poorer neighborhoods, correlate with socioeconomic status. The most common causes of hospitalization for adults aged 25 to 64 and those aged 65 years and older (heart diseases and malignant neoplasms) reflect general societal health trends.

In Manhattan, the seven leading causes of hospitalization in 2000 in each age group were the same as the seven leading causes for the comparable age group in New York City as a whole, except for adults aged 25 to 64, for whom alcohol dependence was the fifth leading cause (whereas in New York City ischemic heart disease was the fifth leading cause and alcohol dependence the ninth leading cause), and adults aged 65 years and older, for whom mental disorders was the seventh leading cause (whereas in New York City diabetes was the seventh leading cause and mental disorders the eight leading cause).

Among children aged 9 years and younger, asthma is the most common cause of hospitalization. The rate of hospitalization for asthma among this age group in Manhattan in 2000 was slightly higher than the rate in New York City as a whole (762 vs. 720 per 100,000 population). For children in Manhattan aged 9 years and less, the rate of hospitalization for mental disorders in 2000 was substantially higher than in New York City overall (139 vs. 67/100,000).

For adolescents aged 10 to17, the rate of hospitalization for pregnancy and related conditions (the leading cause of hospitalization in this age group) in 2000 was somewhat higher in Manhattan than in New York City overall (1,286 vs. 1,070/100,000). The rate of hospitalization for mental disorders, the second leading cause, was substantially higher in Manhattan than in New York City (641 vs. 367/100,000). The rates of hospitalization among adolescents aged 10 to 17 for asthma (420 vs. 271/100,000) and malignant neoplasms (34 vs.22/100,000) were also substantially higher in Manhattan than in New York City overall.

Among adults aged 18 to 24, the rate of hospitalization for pregnancy and related conditions (the leading cause of hospitalization in this age group also) was somewhat lower in Manhattan than in New York City overall (5,620 vs. 9,055/100,000). The rate of hospitalization for mental disorders, the second leading cause of hospitalization, was somewhat higher in Manhattan than in New York City (938 vs. 775/100,000).

For adults aged 25 to 64, pregnancy and related conditions remains the leading cause of hospitalization; the rate in Manhattan in 2000 was somewhat lower than the rate for New York City overall (3,257 vs. 3,782/100,000). The rate of hospitalization for mental disorders among adults aged 25 to 64 was somewhat higher in Manhattan than in New York City (1,349 vs. 1,127/100,000). The rate of hospitalization for alcohol dependence syndrome in this age group was also somewhat higher in Manhattan than in New York City overall (355 vs. 261/100,000).

For adults in Manhattan aged 65 and older, other heart diseases was the first leading cause of hospitalization in 2000 and injuries and poisonings the second leading cause. The rate of hospitalization for injuries and poisonings was somewhat higher in Manhattan than in New York City overall (2,491 vs. 2,148/100,000). The rate of hospitalization for ischemic heart disease, the third leading cause of hospitalization in this age group in Manhattan (vs. second leading cause in New York City), was somewhat lower in Manhattan than in New York City as a whole (2,062 vs. 2,599/100,000). The rate of hospitalization for mental disorders among adults aged 65 and older was somewhat higher in Manhattan than in New York City overall (884 vs. 665/100,000).
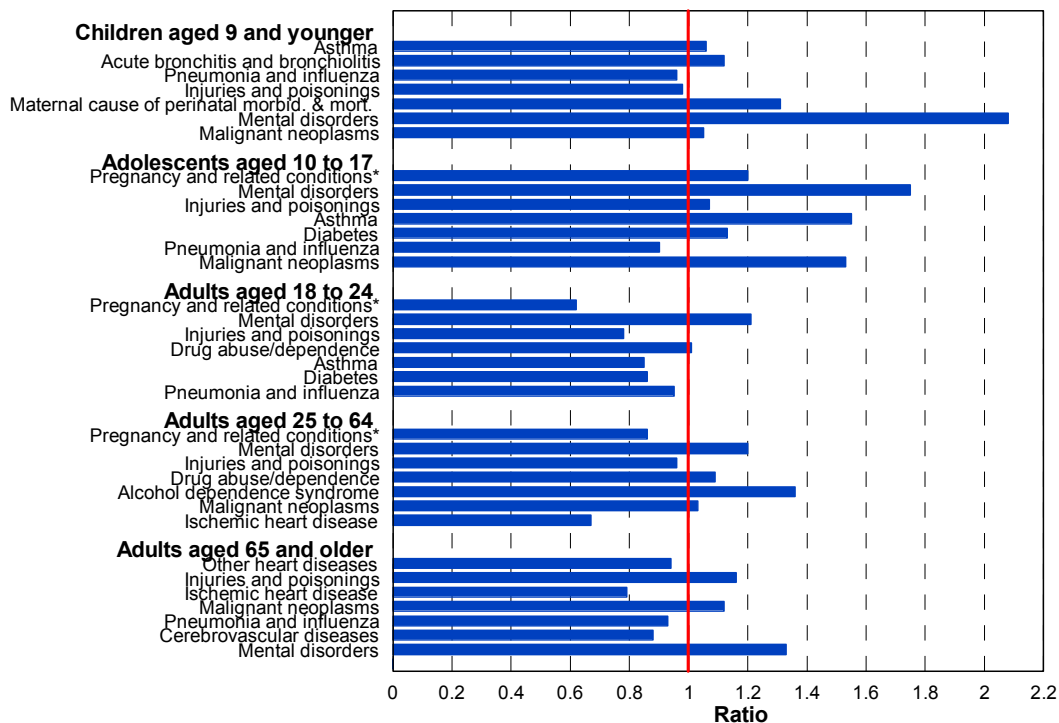
Leading Causes of Hospitalizations by Age for Manhattan, 2000

	Manhattan No. of Hospitalizations	Manhattan Rate/100,000	New York City Rate/100,000
Children Aged 0-9			
Asthma	1,138	762	720
Acute bronchitis and bronchiolitis	684	458	408
Pneumonia and influenza	627	420	439
Injuries and poisonings	600	402	411
Maternal cause of perinatal morbidity and mortality	340	228	173
Mental disorders	207	139	67
Malignant neoplasms	45	30	29
Adolescents Aged 10-17			
Pregnancy and related conditions*	688	1,286	1,070
Mental disorders	696	641	367
Injuries and poisonings	519	478	449
Asthma	456	420	271
Diabetes	75	69	61
Pneumonia and influenza	54	50	55
Malignant neoplasms	37	34	22
Adults Aged 18-24			
Pregnancy and related conditions*	4,740	5,620	9,055
Mental disorders	1,470	938	775
Injuries and poisonings	672	429	550
Drug abuse/dependence	257	164	163
Asthma	155	99	117
Diabetes	110	70	81
Pneumonia and influenza	83	53	56
Adults Aged 25-64			
Pregnancy and related conditions*	15,728	3,257	3,782
Mental disorders	12,629	1,349	1,127
Injuries and poisonings	5,847	625	652
Drug abuse/dependence	4,714	504	461
Alcohol dependence syndrome	3,321	355	261
Malignant neoplasms	2,961	316	308
Ischemic heart disease	2,771	296	442
Adults Aged 65 and older			
Other heart diseases	5,901	3,159	3,375
Injuries and poisonings	4,652	2,491	2,148
Ischemic heart disease	3,852	2,062	2,599
Malignant neoplasms	3,456	1,850	1,647
Pneumonia and influenza	3,192	1,709	1,828
Cerebrovascular diseases	2,518	1,348	1,539
Mental disorders	1,652	884	665

Rate per 100,000 women.

Comparing Leading Causes of Hospitalization by Age

Ratio of Rate in Manhattan to Rate of New York City, 2000

* *Rate per 100,000 women.*

23

Leading Causes of Death

The specific causes of mortality in a community or population group, combined with the mortality rate itself, are among the most important of basic health indicators. Together with hospitalization and reportable disease data, they help elucidate central community health issues, related social and economic costs, opportunities for intervention and prevention, resource allocation, and management of risk factors. They also serve as a fundamental measure of outcome for both community and larger scale health improvement efforts.

Heart disease and cancer remain the first and second leading causes, respectively, of death in the United States. However, with better understanding of risk factors, effective risk reduction, and advances in treatment, the death rate from heart disease is declining.

The leading 7 causes of death in adults aged 25 to 64 in Manhattan in 2000 were, in decreasing order of rate, malignant neoplasms, diseases of the heart, HIV disease, pyschoactive substance use and accidental drug poisoning, cerebrovascular diseases, diabetes mellitus, and assault (homicide). The 7 leading causes of death in New York City for adults aged 25 to 64 were identical (but cerebrovascular diseases ranked sixth and diabetes mellitus fifth). The rates from all 7 leading causes of death were somewhat lower in Manhattan than in New York City as a whole, except for the death rate from HIV disease, which was somewhat higher in Manhattan (48 vs. 41 per 100,000 population), and the death rate from psychoactive substance use and accidental drug poisoning, which was identical (17/100,000).

The great majority of deaths in Manhattan in 2000 among adults aged 65 years and older were caused by heart disease (leading cause) and cancer (malignant neoplasms: second leading cause). The death rate in Manhattan from heart disease in this age group was somewhat lower than the rate in New York City overall (1,786 vs. 2,152/100,000). The death rate in Manhattan from cancer was somewhat higher (1,020 vs. 908/100,000). The death rate from influenza and pneumonia, the third leading cause of death in this age group, was somewhat higher in Manhattan than in New York City (276 vs. 201/100,000). The death rate from cerebrovascular diseases, the fourth leading cause, was also somewhat higher in Manhattan (191 vs. 146/100,000).

Leading Causes of Death by Age for Manhattan, 2000

	Manhattan No. of Deaths	Manhattan Rate/100,000	New York City Rate/100,000
Adults Aged 25-64			
Malignant neoplasms	763	82	91
Diseases of heart	539	58	77
Human immunodeficiency virus (HIV) disease	449	48	41
Psychoactive substance use and accidental drug poisoning	162	17	17
Cerebrovascular diseases	79	8.4	10.5
Diabetes mellitus	76	8.1	11
Assault (homicide)	73	7.8	9.0
Adults Aged 65 and Older			
Diseases of heart	3,336	1,786	2,152
Malignant neoplasms	1,906	1,020	908
Influenza and pneumonia	516	276	201
Cerebrovascular diseases	357	191	146
Chronic lower respiratory diseases	240	128	133
Diabetes mellitus	212	114	137
Nephritis, nephrotic syndrome and nephrosis	133	71	66

Comparing Leading Causes of Death by Age

Ratio of Rate in Manhattan to Rate of New York City, 2000