

## 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: Bronx, 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 *City Wide Community Health Profile: Age Group Perspective*. The present report, *New York City Health Profiles: Bronx, 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: Bronx, 2000* the Department continues the process of providing health information at the neighborhood level for all of New York City. The Bronx 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: Bronx, 2000* is divided into two sections:

The first section presents the health profile of the entire borough of the Bronx, 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 seven 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 Planning and Research Cooperative System). The diagnostic groupings were defined from a principal diagnosis based on the International Classification of Diseases, 9<sup>th</sup> 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-lymphocytes/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 the Bronx and its neighborhoods are compared to the comparable New York City rates, using a ratio. To calculate the ratio, the Bronx rate is divided by the New York City rate. If the rate in the Bronx 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 the Bronx 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 Bronx 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 information presented in the Profile section charts and the (more exhaustive) Appendix F tables is important. 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 the Bronx 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 neighborhood rates to New York City rates is useful for setting health priorities in a community and allocating

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 health 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 the Bronx display a wide range of racial and ethnic diversity. For the borough as a whole, persons of Hispanic origin constitute the largest percentage of the population (48%). In the Bronx, the percentage of the population that is Hispanic is substantially higher than in New York City as a whole (27%), the percentage that is African-American is somewhat higher (31% vs. 25%), and the percentages that are white (15% vs. 34%) and Asian (3% vs. 10%) are substantially lower. In Hunts Point-Mott Haven, 73% of the population is Hispanic, 24% is African-American, and 1% is white. In the Northeast Bronx, 58% of the population is African-American, 20% is Hispanic, and 16% is white. In Kingsbridge-Riverdale, 49% of the population is white, 32% is Hispanic, and 11% is African-American. The percent of persons living in poverty in the Bronx as a whole is somewhat higher than in New York City (28% vs. 19%), and varies from 9.4% in the Northeast Bronx to 45% in Hunts Point-Mott Haven. The percent of adults aged 25 and older without a high school diploma varies from 25% in Kingsbridge-Riverdale to 52% in Crotona-Tremont.

The infant mortality rate (IMR) for the borough as a whole is somewhat higher than for New York City overall (7.4 vs. 6.7 deaths before age 1 year per 1,000 live births). IMR is highest in Kingsbridge-Riverdale (11) and lowest in Pelham-Throgs Neck (4.4). The percent of births to women aged less than 20 is substantially higher in the Bronx as a whole than in New York City (14% vs. 8.6%), and varies from 6.8% in Kingsbridge-Riverdale to 18% in Hunts Point-Mott Haven.

### **Selected Reportable Conditions**

The rate of lead poisoning is lower in the Bronx and its neighborhoods than in New York City overall, except for Fordham-Bronx Park, where the rate is somewhat higher (117 vs. 104 per 100,000 children aged less than 6 years). Rates of chlamydia infection in women are substantially higher in the Bronx than in New York City (859 vs. 538 per 100,000 women), and vary from 261/100,000 in Kingsbridge-Riverdale to 1,349/100,000 in Crotona-Tremont. Rates of gonorrhea and of primary and secondary syphilis in the Bronx do not differ greatly from the comparable rates for New York City overall, except in Hunts Point-Mott Haven where the rates are substantially higher. The rate of AIDS cases in the Bronx is somewhat higher than in New York City overall (62 vs. 55 per 100,000 population), and varies from 22/100,000 in Kingsbridge-Riverdale to 101/100,000 in High Bridge-Morrisania. Tuberculosis rates in the Bronx do not differ substantially from the overall New York City rate. 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 prostate cancer in men aged 25 to 64 years and men aged 65 years and older, for breast cancer in women aged 25 to 64 and women aged 65 and older, for lung cancer in adults aged 25 to 64 and adults aged 65 and older, and for colorectal cancer in adults aged 25 to 64 and adults aged 65 and older in the Bronx (1992-1996) in general do not differ substantially from the comparable rates in New York City overall. The rate of prostate cancer among men aged 45 to 64 in the Northeast Bronx is somewhat higher than in New York City overall (169 vs. 130/100,000). The rates of breast cancer in women aged 65 and older in Crotona-Tremont (232/100,000) and Hunts Point-Mott Haven (215/100,000) are somewhat lower than in New York City overall (373/100,000).

### **Leading Causes of Hospitalization**

The leading causes of hospitalization in the Bronx 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. Compared to New York City, the rate of hospitalization for asthma in 2000 was higher for all age groups in the Bronx except adults aged 65 and older. The rate of hospitalization for asthma in children aged 9 and younger varies from 557/100,000 in Kingsbridge-Riverdale to 1,266/100,000 in High Bridge-Morissania (vs. 720/100,000 in New York City overall). Among adolescents aged 10 to 17, pregnancy and related conditions is the leading cause of hospitalization. Its rate varies from 825/100,000 in Kingsbridge-Riverdale to 1,933/100,000 in High Bridge-Morissania. Pregnancy and related conditions is also the leading cause of hospitalization among adults aged 18 to 24 and adults aged 25 to 64. For adults aged 25 to 64, the rate of hospitalization for HIV and AIDS is substantially higher in the Bronx as a whole (518/100,000) than in New York City (238/100,000); the highest Bronx neighborhood rate is in High Bridge-Morissania (1,012/100,000). Rates of hospitalization for drug abuse and dependence among adults aged 25 to 64 vary from 526/100,000 in Pelham-Throgs Neck to 1,364/100,000 in Crotona-Tremont. For adults aged 65 and older, other heart diseases and ischemic heart disease are the first and second leading causes of hospitalization in the Bronx as a whole and almost all its neighborhoods. The rates of hospitalization for these causes in the Bronx do not differ substantially from the rates in New York City, except in Hunts Point-Mott Haven, where the rate of hospitalization for ischemic heart disease is substantially higher than in New York City overall (4,098 vs. 2,599/100,000).

### **Leading Causes of Death**

Malignant neoplasms and heart disease are the leading causes of death for adults aged 25 to 64 in the Bronx as a whole and all its neighborhoods, except in Crotona-Tremont, High Bridge-Morissania, and Hunts Point-Mott Haven where HIV disease is the first leading cause and heart disease is the third leading cause. The death rate from HIV disease is substantially higher in each of these three neighborhoods (126, 148, and 112/100,000, respectively) than in New York City overall (41/100,000). The death rate from assault (homicide) among adults aged 25 to 64 in Fordham-Bronx Park is substantially higher than in New York City overall (24 vs. 9.0/100,000). The death rate from diabetes mellitus among adults aged 65 and older is substantially higher in Fordham-Bronx Park (305/100,000), Crotona-Tremont (462/100,000), High Bridge-Morissania (352/100,000), and Hunts Point-Mott Haven (415/100,000) than in New York City overall (137/100,000).

# **BRONX HEALTH PROFILE**

# BRONX 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 the Bronx in 2000 was 1,332,650, or 17% of the total population of New York City. In the Bronx, the percentage of the population that is Hispanic (48 %) is substantially higher than in New York City as a whole (27%), while the percentage that is white (15%) is substantially lower than in New York City (34%). The percentage of the population that is African-American (31%) is somewhat higher than in New York City as a whole (25%), and the percentage that is Asian is substantially lower (3% vs. 10%). The age-adjusted death rate in 2000 was somewhat higher in the Bronx than in New York City as a whole (847 vs. 737 per 100,000 population). The percent of persons living in poverty was somewhat higher in the Bronx (28%) than in New York City overall (19%). The percent of adults aged 25 and older without a high school diploma was substantially higher in the Bronx (41% vs. 32%), and the percent of linguistically isolated households was somewhat higher (15% vs. 12%). The percentage of the population aged 25 years and less was somewhat higher in the Bronx than in New York City overall (40% vs. 34%), and the percentage aged 65 and older was somewhat lower (10.1% vs. 12%).

The infant mortality rate (IMR: the number of deaths in infants less than 1 year of age per 1,000 live births) was somewhat higher in the Bronx (7.4) 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 IMR in 2000 in New York City was 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 substantially higher in the Bronx than in New York City overall (14% vs. 8.6%), and the percent of women receiving first trimester prenatal care in the Bronx was somewhat lower (54% vs. 60%). The percent of low birth weight babies in the Bronx was somewhat higher than in New York City as a whole (9.3% vs. 8.3%).

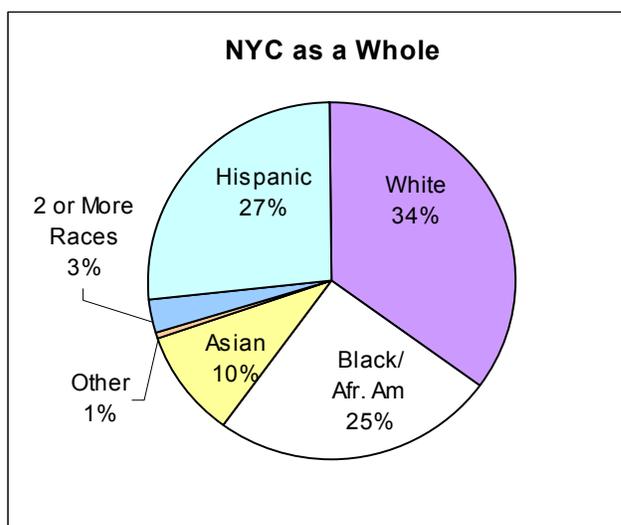
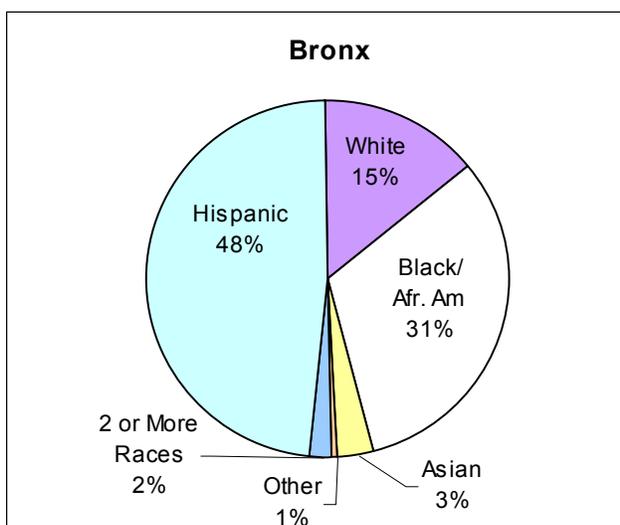
**Demographic Characteristics and Vital Statistics Related to Birth**  
Bronx Compared to New York City, 2000

	<u>Bronx</u>	<u>New York City</u>
Total Population	1,332,650	8,008,278
Age-adjusted death rate (deaths per 100,000)	847	737
Fertility rate (births per 1,000 women aged 15 to 44)	67	66
Infant Mortality rate (deaths before age 1 year per 1,000 live births)	7.4	6.7
Percent of births to women less than 20 years old	14	8.6
Percent of women receiving first trimester prenatal care	54	60
Percent low birth weight babies (percent of live births <2500 grams)	9.3	8.3
Percent of persons living in poverty*	28	19
Percent of adults aged 25 and older without a high school diploma*	41	32
Percent of linguistically isolated households*	15	12
Percent of population less than 25 years old	40	34
Percent of population greater than or equal to 65 years old	10.1	12

\*Based on 1990 Census

**Population by Race/Ethnicity**

Bronx Compared to New York City, 2000



## **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 the Bronx, approximately 64% of housing units were built before 1960. In the Bronx, 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 (76 vs. 104 per 100,000 population).

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 the Bronx in 2000 was substantially higher than in New York City overall (859 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 the Bronx was somewhat higher than in New York City overall (209 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 Bronx residents in 2000 was somewhat lower than in New York City (1.2 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 Bronx residents in 2000 (62/100,000) was somewhat higher than the overall New York City rate (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 Bronx residents in 2000 was nearly identical to the overall New York City rate (16 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 Bronx residents in 2000 was somewhat higher than the overall New York City rate (8.8 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 Bronx residents in 2000 was substantially higher than in New York City overall (5.2 vs. 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 no human case of West Nile viral disease in the Bronx. 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 Bronx residents in 2000 was somewhat lower than in New York City overall (1.3 vs. 2.6/100,000).

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 Bronx residents in 2000 was substantially lower than in New York City overall (0.2 vs. 0.6/100,000).

Salmonellosis, caused by *Salmonella enteritidis*, 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 the bacteria *Campylobacter jejuni*, 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 campylobacteriosis and salmonellosis in Bronx residents in 2000 were somewhat higher than the comparable rates for New York City overall, and the rate for yersiniosis was substantially higher (0.5 vs. 0.3/100,000). 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 Bronx residents in 2000 was substantially lower than in New York City overall (5.3 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 Bronx residents was slightly higher than in New York City overall (0.8 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 Bronx residents in 2000 was somewhat lower than in New York City overall (6.0 vs. 6.7/100,000).

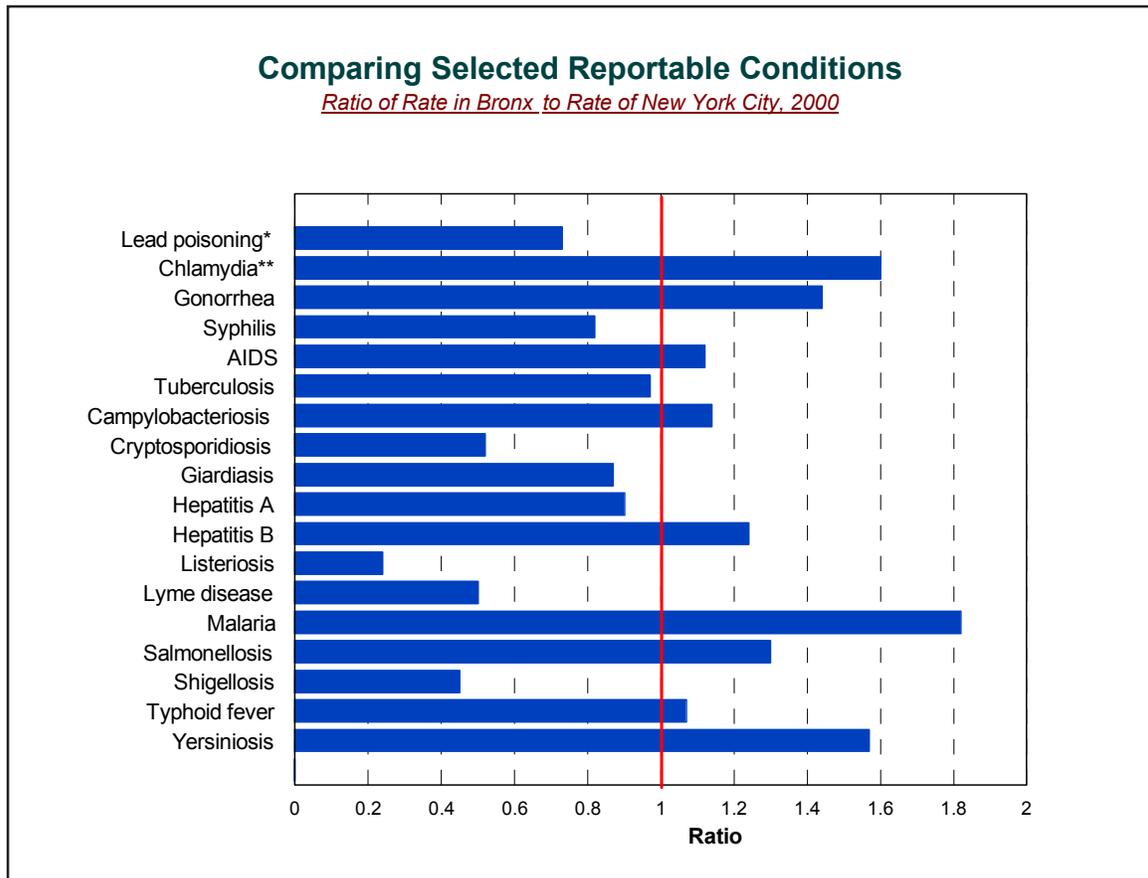
Both typhoid fever and hepatitis A can be prevented by strict attention to food and water precautions when traveling to developing countries. Travelers should boil water before drinking or drink bottled water, ask for drinks with no ice or use ice made from boiled water, eat foods that have been thoroughly 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 or 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 Bronx residents, the rate of cryptosporidiosis in 2000 was somewhat lower than in New York City overall (1.1 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 Bronx residents in 2000 was somewhat lower than in New York City overall (19 vs. 22/100,000).

### Selected Reportable Conditions for Bronx, 2000

	Bronx No. of Cases	Bronx Rate/100,000	New York City Rate/100,000
Lead poisoning*	101	76	104
Chlamydia**	6,120	859	538
Gonorrhea	2,788	209	146
Syphilis	16	1.2	1.5
AIDS	829	62	55
Tuberculosis	215	16	17
Campylobacteriosis	164	12	11
Cryptosporidiosis	15	1.1	2.1
Giardiasis	256	19	22
Hepatitis A	80	6.0	6.7
Hepatitis B	117	8.8	7.1
Listeriosis	2	0.2	0.6
Lyme disease	17	1.3	2.6
Malaria	69	5.2	2.8
Salmonellosis	261	20	15
Shigellosis	70	5.3	12
Typhoid fever	10	0.8	0.7
Yersiniosis	6	0.5	0.3



\* 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 rate (1992-1996) for adults in the Bronx aged 45 to 64 was nearly identical to the rate for New York City overall. The average yearly lung cancer rate for adults in the Bronx aged 65 and older was slightly lower than in New York City (264 vs. 280/100,000).

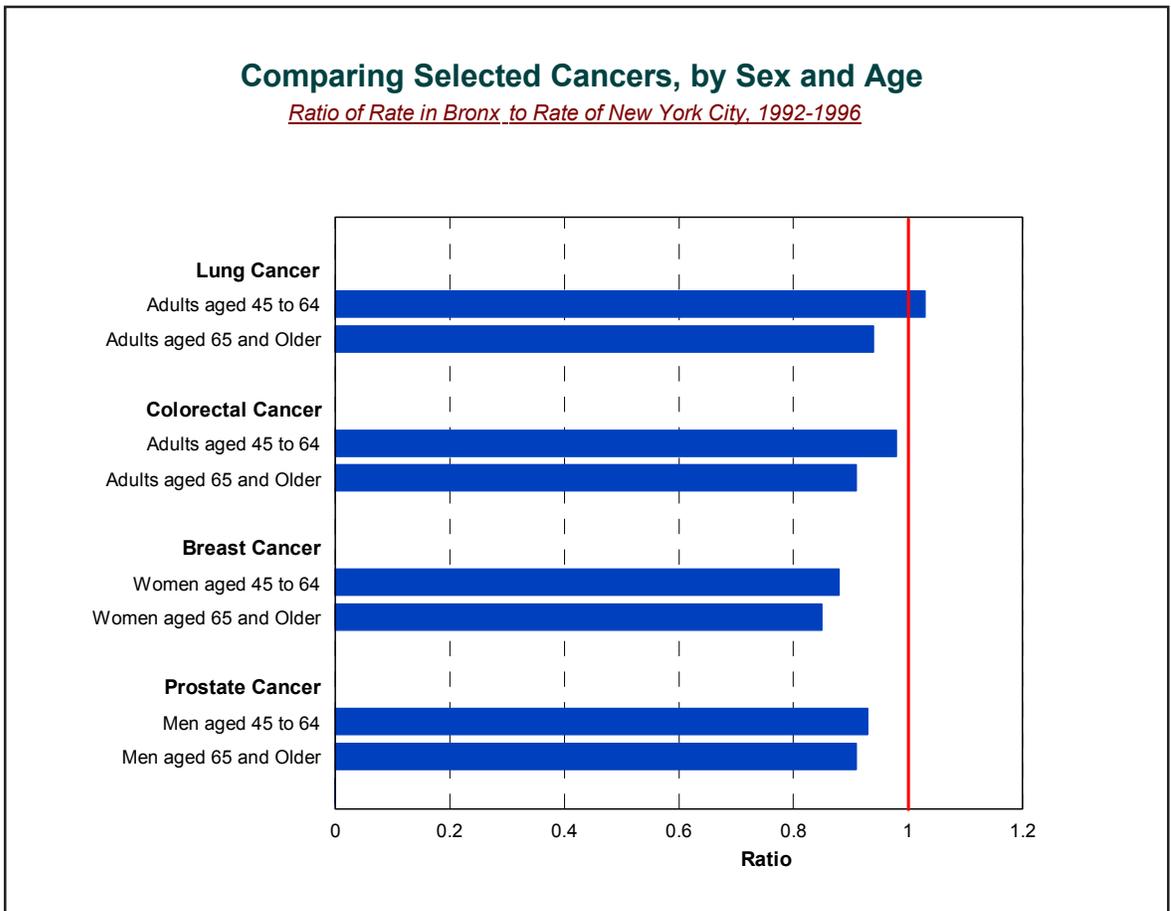
Colorectal cancer is the second most common cause of cancer deaths. Approximately 135,000 new cases and 56,000 deaths are expected in the U.S. in 2001. Evidence suggests that cigarette smoking and a diet high in total fat, meat, calories and alcohol are associated with an increased risk of colon cancer. Studies indicate that an increased intake of fruits and vegetables and moderate exercise can help protect against the disease. The average yearly rate of colorectal cancer (1992-1996) for adults in the Bronx aged 45 to 64 was nearly identical to the rate for New York City overall. The average yearly rate for adults in the Bronx aged 65 and older was slightly lower than the overall New York City rate (284 vs. 313/100,000).

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 rates in the Bronx (1992-1996) for women aged 45 to 64 (175 per 100,000 population) and for women 65 years and older (318/100,000) were somewhat lower than the comparable rates for New York City overall (200/100,000 and 373/100,000, respectively). The rate in the Bronx 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 rates of prostate cancer among men in the Bronx (1992-1996) aged 45 to 64 and men aged 65 years and older were slightly lower than the rates for New York City as a whole.

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

	Bronx No. of Cases	Bronx Avg. Yearly Rate/100,000	New York City Avg. Yearly Rate/100,000
<b>Lung Cancer</b>			
Adults aged 45 to 64	1,070	85	82
Adults aged 65 and Older	1,765	264	280
<b>Colorectal Cancer</b>			
Adults aged 45 to 64	701	56	57
Adults aged 65 and Older	1,901	284	313
<b>Breast Cancer</b>			
Women aged 45 to 64	1,221	175	200
Women aged 65 and Older	1,352	318	373
<b>Prostate Cancer</b>			
Men aged 45 to 64	678	122	130
Men aged 65 and Older	1,795	735	805



## **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 disease and malignant neoplasms) reflect general societal health trends.

In the Bronx, the seven leading causes of hospitalization in 2000 for each age group were the same as the seven leading causes for the same age group in New York City as a whole, with three exceptions: HIV and AIDS was the seventh leading cause of hospitalization in the Bronx for adolescents aged 10 to 17 (vs. eighth leading cause for adolescents in New York City); HIV and AIDS was the fifth leading cause of hospitalization in the Bronx for adults aged 25 to 64 (vs. eleventh leading cause for the same age group in New York City); and asthma was the seventh leading cause of hospitalization in the Bronx for adults aged 25 to 64 (vs. eighth leading cause for the same age group in New York City).

Compared to New York City, the rate of hospitalization for asthma in 2000 was higher for all age groups in the Bronx except adults aged 65 and older. In children aged 9 years and younger, the rate of hospitalization for asthma in the Bronx was somewhat higher than in New York City overall (1,069 vs. 720 per 100,000 population). In adolescents aged 10 to 17 (457 vs. 271/100,000), adults aged 18 to 24 (194 vs. 117/100,000) and adults aged 25 to 64 (494 vs. 262/100,000), the rates of hospitalization for asthma in the Bronx were substantially higher than in New York City overall.

Among adolescents aged 10 to 17, the rate of hospitalization in the Bronx for pregnancy and related conditions (the leading cause of hospitalization for this age group, as well as for adults aged 18 to 24 and adults aged 25 to 64) was somewhat higher than the rate for New York City overall (1,508 vs. 1,070/100,000).

In the Bronx, the rates of hospitalization in 2000 for drug abuse and dependence among adults aged 18 to 24 (248 vs. 163/100,000) and adults aged 25 to 64 (805 vs. 461/100,000) were substantially higher than in New York City as a whole. The rate of hospitalization for diabetes in adults aged 18 to 24 was also substantially higher in the Bronx (124 vs. 81/100,000).

For adults aged 25 to 64, the rate of hospitalization for HIV and AIDS was substantially higher in the Bronx than in New York City overall (518 vs. 238/100,000).

For adults in the Bronx aged 65 and older, other heart diseases and ischemic heart disease were the first and second most frequent causes of hospitalization in 2000. The rate of hospitalization for other heart diseases was somewhat higher in the Bronx than in New York City overall (3,944 vs. 3,375/100,000).

## Leading Causes of Hospitalizations by Age for Bronx, 2000

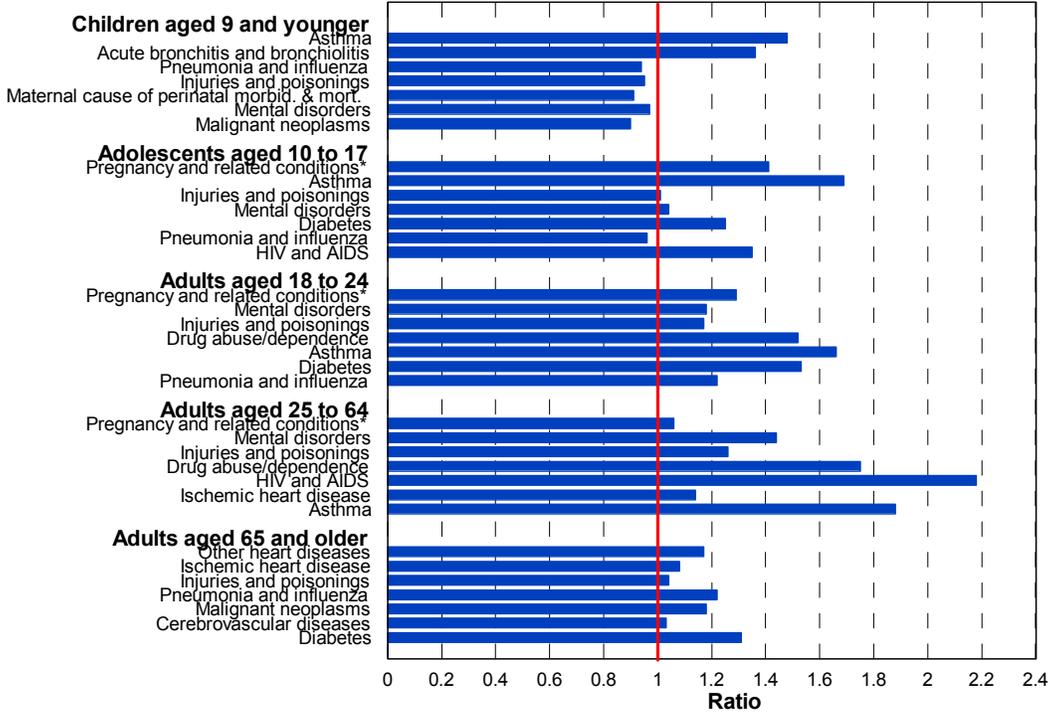
	Bronx No. of Hospitalizations	Bronx Rate/100,000	New York City Rate/100,000
<b>Children Aged 0-9</b>			
Asthma	2,453	1,069	720
Acute bronchitis and bronchiolitis	1,277	556	408
Pneumonia and influenza	947	413	439
Injuries and poisonings	896	390	411
Maternal cause of perinatal morbidity & mortality	361	157	173
Mental disorders	149	65	67
Malignant neoplasms	59	26	29
<b>Adolescents Aged 10-17</b>			
Pregnancy and related conditions*	1,240	1,508	1,070
Asthma	768	457	271
Injuries and poisonings	763	455	449
Mental disorders	640	381	367
Diabetes	128	76	61
Pneumonia and influenza	89	53	55
HIV and AIDS	38	23	17
<b>Adults Aged 18-24</b>			
Pregnancy and related conditions*	8,545	11,721	9,055
Mental disorders	1,294	914	775
Injuries and poisonings	911	644	550
Drug abuse/dependence	351	248	163
Asthma	274	194	117
Diabetes	176	124	81
Pneumonia and influenza	96	68	56
<b>Adults Aged 25-64</b>			
Pregnancy and related conditions*	14,403	4,006	3,782
Mental disorders	10,721	1,625	1,127
Injuries and poisonings	5,438	824	652
Drug abuse/dependence	5,314	805	461
HIV and AIDS	3,420	518	238
Ischemic heart disease	3,325	504	442
Asthma	3,261	494	262
<b>Adults Aged 65 and older</b>			
Other heart diseases	5,283	3,944	3,375
Ischemic heart disease	3,767	2,812	2,599
Injuries and poisonings	2,995	2,236	2,148
Pneumonia and influenza	2,977	2,223	1,828
Malignant neoplasms	2,603	1,943	1,647
Cerebrovascular diseases	2,114	1,578	1,539
Diabetes	1,370	1,023	782

\* Rate per 100,000 women.



## Comparing Leading Causes of Hospitalization by Age

*Ratio of Rate in Bronx, to Rate of New York City, 2000*



\* Rate per 100,000 women.

## **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 for adults aged 25 to 64 in the Bronx in 2000 were, in decreasing order of rate, malignant neoplasms, diseases of the heart, HIV disease, psychoactive substance use and accidental drug poisoning, diabetes mellitus, assault (homicide), and cerebrovascular diseases. The 7 leading causes of death in New York City for adults aged 25 to 64 were identical (but cerebrovascular diseases ranked sixth and assault seventh). The death rates in this age group from HIV disease (74 vs. 41 per 100,000 population), psychoactive substance use and accidental drug poisoning (28 vs. 17/100,000), and assault (14 vs. 9/100,000) were substantially higher in the Bronx than in New York City overall. The death rate from diabetes in adults aged 25 to 64 was somewhat higher in the Bronx than in New York City (16 vs. 11/100,000).

The great majority of deaths in the Bronx in 2000 among adults aged 65 and older were caused by heart disease (leading cause) and cancer (malignant neoplasms: second leading cause). The death rate in the Bronx from both causes was nearly identical to the comparable rate in New York City overall. Diabetes mellitus was the third leading cause of death in this age group in the Bronx, but only the fifth leading cause in New York City as a whole. The death rate from diabetes mellitus in adults aged 65 and older was substantially higher in the Bronx than in New York City (244 vs. 137/100,000). The death rate from essential hypertension and hypertensive renal disease (seventh leading cause of death in this age group in the Bronx vs. eighth leading cause in New York City) was substantially higher in the Bronx than in New York City overall (94 vs. 62/100,000).

## Leading Causes of Death by Age for Bronx, 2000

	Bronx No. of Deaths	Bronx Rate/100,000	New York City Rate/100,000
<b>Adults Aged 25-64</b>			
Malignant neoplasms	668	101	91
Diseases of heart	612	93	77
Human immunodeficiency virus (HIV) disease	491	74	41
Psychoactive substance use and accidental drug poisoning	184	28	17
Diabetes mellitus	107	16	11
Assault (homicide)	95	14	9
Cerebrovascular diseases	89	13	10
<b>Adults Aged 65 and Older</b>			
Diseases of heart	2,974	2,220	2,152
Malignant neoplasms	1,266	945	908
Diabetes mellitus	327	244	137
Influenza and pneumonia	317	237	201
Cerebrovascular diseases	225	168	146
Chronic lower respiratory diseases	210	157	133
Essential hypertension and hypertensive renal disease	126	94	62

### Comparing Leading Causes of Death by Age

*Ratio of Rate in Bronx to Rate of New York City, 2000*

