

2005 MORTALITY REPORT

**Department of Health
Center for Policy, Planning, and Epidemiology
State Center for Health Statistics**

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INTRODUCTION

Maintaining good health and wellness for individuals and communities depends not only on health care for the sick but also on providing opportunities to prevent health problems and improve the basic health and well-being of residents. A measure of the relative health of the total population of a community is its health profile or health status. Together with demographic and socioeconomic data, health status indicators provide the basic information for defining the community's health needs and assessing the manner in which the health care system can meet those needs.

At the same time as the federal *Healthy People 2010 Plan* was released in the year 2002, the DHHS Office of Disease Prevention and Health Promotion released a list of 10 leading health indicators selected for nationwide tracking, "based on their ability to motivate action, the availability of data to measure their progress, and their relevance as broad public health issues." The 10 leading health indicators are physical activity, overweight and obesity, tobacco use, substance abuse, responsible sexual behavior, mental health, injury and violence, environmental quality, immunization, and access to health care. All of these indicators are of concern to the Department of Health (DOH), but its selection of health priority areas was governed by the health demands of District of Columbia residents and known or proposed resources to meet those demands.

Population by Ward

Despite their original intent as political subdivisions for the purpose of voting and representation, the eight wards of the District now provide a useful mechanism for analyzing and comparing sub-populations and for analyzing trends in the changing health status of residents. The average number of residents per Ward in 2000 was 71,507, down 5.7 percent from the 1990 average of 75,861. The largest number of residents (74,937) resided in Ward 4 and Ward smallest number (68,037) lived in Ward 6 in 2000 (Table 1). The wards are geographically, economically and ethnically diverse and care should be taken to understand the similarities and differences when comparisons are made. The city is also divided into Census tracts drawn by the U.S. Bureau of the Census and updated after each decennial census to represent approximately 3,200 people. In 1980 the city had 182 census tracts; the number grew to 192 in 1990 and fell to 188 in 2000.

There is significant variation in the race distribution of the population by Ward in the District of Columbia. In 2000 Ward 7 had the largest proportion of Blacks/African Americans (97 percent) and the lowest proportion of Whites (1.4 percent). By contrast Ward 3 had the lowest proportion of Blacks/African Americans (6.3 percent) and the largest proportion of Whites (83.6 percent). Ward 2 had the highest proportion of Asians and Pacific Islanders (7.0 percent) and Ward 1 had the highest proportion of Hispanic/Latino residents (23.4 percent). These differences are important when assessing the incidence and rates of certain health indicators that are known to vary significantly by race and ethnicity. Table 1 presents a more complete picture of the distribution of race by Ward for 2000.

Table 1. Distribution of District of Columbia Population by Single Race and Hispanic Origin* by Ward in 2000 (number and percent)

Ward	Total Population	<i>Single Race</i>						Two or more races	Hispanic/Latino
		White	Black	American Indian/Alaska Native	Asian	Native Hawaiian and Other Pacific Islander	Some Other Race		
City	572,059	176,101	343,321	1,713	15,189	348	21,950	13,446	44,953
	100.0%	30.8%	60.0%	0.3%	2.7%	0.1%	3.8%	2.4%	7.9%
1	80,014	28,138	34,581	401	2,875	54	10,450	3,515	18,750
	100.0%	35.2%	43.2%	0.5%	3.6%	0.1%	13.1%	4.4%	23.4%
2	82,845	46,570	25,206	285	5,730	109	2,672	2,273	7,155
	100.0%	56.2%	30.4%	0.3%	6.9%	0.1%	3.2%	2.7%	8.6%
3	79,566	66,537	5,049	148	4,214	42	1,561	2,015	5,138
	100.0%	83.6%	6.3%	0.2%	5.3%	0.1%	2.0%	2.5%	6.5%
4	71,393	7,332	55,628	235	612	29	5,368	2,189	9,158
	100.0%	10.3%	77.9%	0.3%	0.9%	0.0%	7.5%	3.1%	12.8%
5	66,548	5,268	58,706	205	539	16	769	1,049	1,666
	100.0%	7.9%	88.2%	0.3%	0.8%	0.0%	1.2%	1.6%	2.5%
6	65,457	17,776	44,992	157	821	39	529	1,080	1,585
	100.0%	27.2%	68.7%	0.2%	1.3%	0.1%	0.9%	1.6%	2.4%
7	64,704	902	62,677	146	118	16	219	626	589
	100.0%	1.4%	96.9%	0.2%	0.2%	0.0%	0.3%	1.0%	0.9%
8	61,532	3,578	56,477	136	280	43	319	699	912
	100.0%	5.8%	91.8%	0.2%	0.5%	0.1%	0.5%	1.1%	1.5%

*Persons of Hispanic origin may be of any race. Each race category contains persons of both Hispanic and non-Hispanic origin.

Prepared by D.C. Office of Planning/State Data Center

Source of Data: U.S. Census Bureau

Health Insurance Coverage

According to data from the Kaiser Family Foundation, the majority of adult District residents in 2005 received health insurance coverage through their employer. Among females, the second-largest proportion (17.0%) received health insurance coverage through Medicaid; however, among males, the second-largest proportion (21.0%) was uninsured. This highlights a disparity between the proportion of males (21.0%) and females (12.0%) in the District who had no health insurance. In 2005, according to the federal Centers for Medicare and Medicaid Services, 28.0% of District residents were covered by Medicaid and 13% were covered by Medicare. Also, in 2005, the District Government spent approximately \$1.3 billion dollars on Medicaid and \$93 million on the Healthcare Alliance. A total of \$569 million in federal dollars were spent on Medicare for the District in 2005.¹

Table 2. Health Insurance Coverage of DC Adult Residents (19 to 64 years of age), 2005

Source of Insurance	Males		Females %		Total	
	No.	%	No.	%	No.	%
Employer	99,292	58.0	117,328	62.0	216,620	60.0
Individual Plan	11,684	7.0	14,225	8.0	25,908	7.0
Medicaid	19,789	12.0	32,633	17.0	52,422	15.0
Other public provider	3,581	2.0	2,408	1.0	5,989	3.0
None/uninsured*	36,669	21.0	22,253	12.0	58,922	16.0
Source: Kaiser Family Foundation						
Note: Percentages may not add to 100.0% because of rounding.						
* Persons enrolled in DC Healthcare Alliance are included in this category.						

¹ <http://www.cms.hhs.gov/home/rsds.asp>

HEART/CARDIOVASCULAR DISEASE

Cardiovascular disease (CVD) refers to a group of diseases and conditions that affect the heart and blood vessels. Heart attack, strokes, atherosclerosis, and heart failure are all conditions that can result from CVD. The District of Columbia bears a heavy burden. According to hospital discharge data in 2002 for the District, CVD causes more than one third (36.3%) of the deaths in the District and yields a financial burden in excess of \$1 billion annually. Although certain risk factors, such as genetic makeup, cannot be modified, some are and can be prevented. CVD risk factors include high serum (or blood) cholesterol levels, overweight/obesity, physical inactivity, high fat diets, tobacco use, diabetes and hypertension. The Cardiovascular Health Program of the DC DOH was developed to address the epidemic of CVD. Strategies of the Program include raising awareness of CVD, increasing services and creating policies supportive of health.

Addressing the Cardiovascular Disease Epidemic

The District of Columbia Cardiovascular Health Program has made substantial progress in responding to the CVD epidemic.

ACCESS and OUTREACH:

- The ASPIRE (Acute Stroke Program of Interventions Addressing Racial and Ethnic Disparities) program works in conjunction with 5 District hospitals

COLLABORATION:

- Several health promotion programs addressing Cardiovascular Disease in the District
- Examples of American Heart Association Programs:
 - Get With the Guidelines Software Program*--provides hospitals with gold standards of care software for treating patients with heart failure, stroke and coronary artery disease.
 - Power to End Stroke Program*-- utilizes CBOs to promote the awareness of high blood pressure and the prevention of strokes
 - START Program*-- seeks to recruit District businesses into becoming fit-friendly companies.

INNOVATION and EDUCATION:

- LIOB media created a training video and mobile pocket guide for District first responders to recognize and treat acute stroke victims prior to hospitalization.
- The Cardiovascular Health Program (CHP) has published two key fact sheets, which provide summary data of the District of Columbia with regard to cardiovascular disease and stroke. Translations are available in Spanish, Chinese and Vietnamese.
- Prevention and control document produced entitled, "*Working Together Toward a Healthier Community: The District of Columbia Plan to Prevent and Control Cardiovascular Diseases, Diabetes and Kidney Diseases 2008 – 2013*," provides the vision for CDK for the next five years.

BREAST AND CERVICAL CANCER

DC ranks highest amongst all states in the US for breast cancer mortality. Cancer is the second leading cause of death among women in the District of Columbia. White women are at higher risk of developing breast cancer,ⁱ but black women are at higher risk of dying from the disease.ⁱⁱ The District of Columbia cervical cancer mortality rate is also higher than other states. These disparities draw attention to differences in utilization of services for early detection, case management and other issues pertaining to access. Approximately 300,000 people in DC live in a “Health Professional Shortage Area (HPSA).” This includes many of the working poor who lack a primary care provider or medical home. These residents are less likely to receive care from a physician who knows their health history and provides continuous high quality medical care.

Addressing Breast and Cervical Cancer

ACCESS and OUTREACH:

The United States Department of Health and Human Services Center for Disease Control and Prevention’s Breast and Cervical Cancer Early Detection Program provides funding for Project WISH. Project WISH seeks to increase the delivery of breast and cervical cancer screening and early detection services, by creating a demand for and providing enhanced access to quality culturally relevant services for all eligible women in the District of Columbia.

Elements of the program include:

- Free clinical breast exams, mammograms, and pap smear tests to eligible women
- Follow up tests and case management if results are abnormal
- Transportation to and from exams
- Translation services provided upon request
- Rescreening reminders sent when due for a mammogram

Efforts are currently in progress to have the Project WISH brochure translated to other languages spoken in the District.

COLLABORATION:

- Ethnic networks exist in the District to address language and cultural barriers with the 16.87% of District residents that speak a language other than English as their primary language
- Development of partnerships with area hotels and other employers that provide employment to working poor females
- Partnership with the Community Court wherein at an encounter with the Court information about Project WISH services is provided
- Partnership with a court diversion program for women charged with prostitution. This has special significance for the cervical screening component of Project WISH
- Partnership with the Mautner Program to reach lesbian, bisexual, transgender women and their families

INNOVATION and EDUCATION:

- Direct mail utilizing the DC voter registration information will be utilized to maximize the reach of the program
- Seek the support of area physicians in providing screening referrals at the time of regular patient visits

COMPREHENSIVE CANCER CONTROL

In (insert year) DC had one of the highest age-adjusted cancer mortality rate for men (311/100,000 persons) and women (199/100,000 persons) in the United States. According to the American Cancer Society, in 2008 about 2,680 individuals will be diagnosed with cancer in the District and 1,080 will die of the disease. Cancer is one of the leading causes of death in the District among those 85 years and younger. African Americans have higher cancer mortality rates (245/100,000 persons) than whites (140/100,000 persons) for all sites (rates are age-adjusted to the 2000 U. S. standard population).

Addressing the high cancer incidence and mortality rates

The inequitable distribution of cancer care plays a major role in the District's high mortality rates. The racial/ethnic disparities with regard to cancer prevention and treatment in terms of screening, early detection, survivorship, palliative and end-of life care is substantial.

ACCESS and OUTREACH:

- Increase cancer screening and rescreening rates; especially for breast and cervical, colorectal, and prostate cancer.
- Through the DC Budget Support Act, the first prostate cancer screening van program was introduced to the City and operated at Howard University Cancer Center.

COLLABORATION:

- Partnership with the DC Cancer Consortium; an organization composed of over 50 stakeholders, to implement the DC Cancer Control Plan 2005-2010, and ensure funding is utilized to ease the cancer burden among the uninsured, underinsured, and/or low income District residents.
- The DC Cancer Registry, Project WISH, the Comprehensive Cancer Control Program and the DC Tobacco Control Program are active partners under the matrix of cancer control and continue to collaborate, share resources and information.
- Maintain collaborations and support of the cancer centers and organizations within the District, community and faith based organizations and hospitals who provide cancer education, screenings, treatment and referral/resource services to the District's culturally diverse underserved populations.

INNOVATION and EDUCATION:

- Increase public awareness of healthy behaviors that help prevent cancer and the importance of early detection.
- Educating health care providers about current trends and best practices in the detection and treatment of cancer.
- Educating survivors and caregivers about available resources and follow-up care.
- The first cancer plan for the District of Columbia, "*Facing the Challenge, DC Cancer Control Plan 2005-2010*," was launched. This serves as a "*blueprint to reduce the number of new cases of cancer, the number of cancer-caused deaths and to improve the quality of life for cancer survivors in the Nation's Capitol*"
- The *Community Access to Health Care Omnibus Act of 2006* authorized and granted a \$20 million dollar/five year *Health Care Improvement Grant* to the DCCC for the implementation a comprehensive cancer prevention program monitored by DOH

HIV/AIDS

HIV/AIDS is the leading cause of premature death among District residents. Although significant strides in the diagnosis, treatment and survival of those living with HIV and AIDS have occurred locally, the District remains a city with the highest burden of the disease in the United States. The District has a modern epidemic – modern because of its sheer size and complexity. The District's HIV/AIDS rates are twice as high as New York City and four times that of Detroit. The District has every mode of new HIV infections with nearly 40% through heterosexual contact, one-third from men who have sex with men and 15% from injection drug use. However, DOH estimates as many as 1 in 20 people have HIV, with one-quarter unaware of their diagnosis. The District is implementing a comprehensive response to the epidemic by building on its national leadership of promoting routine testing to full implementation in all medical settings, retooling prevention strategies up to scale to reduce risky behavior and infections, eliminating mother-to-child HIV transmission through new collaborations among maternal health providers, strengthening partnerships with community providers to help young people make healthy choices, growing capacity of small and faith-based organizations to mainstream HIV into their activities, and increasing the access and quality of care and treatment services.

Addressing HIV/AIDS/STD Epidemics

The District of Columbia HIV / AIDS Administration (HAA) has made substantial progress in responding to the HIV/AIDS/STD epidemics.

ACCESS and OUTREACH:

- Expanded the availability of free HIV testing by tripling locations.
- Expanded routine rapid HIV testing in labor and delivery suites at hospitals and birthing centers to help eliminate mother-to-child transmission.

COLLABORATION:

- Partnerships with hospitals (Howard University, George Washington University Hospital) and primary care centers (Unity Health Care, Family & Medical Counseling Service) to start routine testing in medical settings.
- HAA will be implementing voluntary school-based STD screening in public high schools in 2008-2009, one of only two jurisdictions in the country. HAA piloted the screening with some DC Public Charter Schools.
- National model partnership with DC Jail of voluntary, automatic testing of more than 30,000 individuals entering the correction facility, followed by treatment for positives and discharge planning for reentry into communities.

INNOVATION and EDUCATION:

- Launched the first-ever, citywide initiative to implement routine testing, now moving to full implementation of routine HIV testing in all medical settings.
- First jurisdiction to offer voluntary STD and HIV testing for young people participating in the Summer Youth Employment Program – more than 2,000 young people screened for STDs and more than 100 for HIV.
- Developed and implementing comprehensive youth and HIV prevention plan with goals to increase HIV testing and reduce transmission rates with community partnerships.
-

DIABETES

The burden of diabetes on District residents is significant and growing at an alarming rate. Diabetes is the sixth leading cause of death in the District of Columbia. In 2004, diabetes, when combined with its co-morbid conditions such as cardiovascular disease and kidney disease account for more than 37 percent of all deaths in the city. Each year, diabetes and its related conditions cost District tax payers and businesses more than \$2.5 billion in direct medical costs. The District's response to the epidemic is to strategically equip the city's health system and broader community with the tools and resources needed to prevent and control the spread of the disease.

Addressing the Diabetes Epidemic

The District of Columbia Diabetes Prevention and Control Program (DPCP) has made substantial progress in responding to the diabetes epidemic.

ACCESS and OUTREACH:

- Sponsored training to increase the number of individuals certified to implement Stanford University's Chronic Disease Self-Management Program (CDSMP)
- Provided 5 mini-grants to support organizations in the implementation and evaluation of the Chronic Disease Self-Management Program
- The Diabetes Prevention and Control Program partnered with the National Kidney Foundation of the National Capitol Area to provide community-based diabetes, cardiovascular and kidney disease screenings. Since 2006, the National Kidney Foundation has screened more than 1,500 residents. Findings from the community screenings indicate that large numbers of residents may be at risk for kidney disease due to poor diabetes and blood pressure control.

COLLABORATION:

- The Diabetes for Life Learning Center is a collaborative effort between the Department of Health, the Washington Hospital Center and the District of Columbia Public Library System. The Learning Center is the first library based initiative that focuses on diabetes in the District of Columbia.
- Comprehensive plan (2007) created by partners to prevent and control diabetes and its related conditions

INNOVATION and OUTREACH:

- Spring of 2007, state of the art diabetes treatment center was built at Howard University Hospital
- DPCP and community partners assisted the Upper Cardozo community clinic with establishing a diabetes electronic tracking system and quality improvement initiative
- The Diabetes For Life Learning Center at the Martin Luther King Library and the DOH Diabetes program were awarded the 2007 Metropolitan Public Health Award by the DC Public Health Association

ASTHMA

Asthma is a debilitating disease that affects District residents of all ages, races, and ethnic groups. According to the 2005 Centers for Disease Control and Prevention (CDC) Behavioral Risk Factor Surveillance Survey (BRFSS), an estimated 9.2 percent of the District's adult residents over the age of 18 have asthma, or approximately 40,000 adults. Based on the 2003 National Center for Health Statistics data, 11.8 percent of District children, or 13,000, had asthma.

The asthma crisis is more strongly evidenced in those geographic areas of the District where there are high concentrations of poverty, poor health, and other environmental factors. In 2001 the District responded to the asthma epidemic by forming the DC Control Asthma Now (DC CAN) Initiative. The mission of DC CAN is to work collaboratively with community partners to reduce the burden of asthma in the District.

ADDRESSING ASTHMA

The District of Columbia Child Adolescent and School Health Administration Asthma Control Program, DC Control Asthma Now (DC CAN), has made substantial progress in responding to the asthma epidemics.

ACCESS and OUTREACH:

- Increased the number of asthma self-management programs for senior citizens
- Developed and distributed standardized asthma and anaphylaxis medication plans to school nurses and healthcare providers

COLLABORATION:

- Developed the 2003 Strategic Plan with community partners
- Partnered with the former National Capital Asthma Coalition to develop policies, legislation and appropriate forms to implement the Student Access to Treatment Act 2007
- Partnered with Children's National Medical Center Improving Pediatric Asthma Care in the District of Columbia (IMPACT DC) to collect emergency department data
- Partnered with George Washington University to conduct a study on the reporting of work related asthma
- Partnered with Children Environmental Health Network to conduct environmental assessments and educational programs for childcare centers

INNOVATION and EDUCATION:

- Draft legislation which has become the Student Access to Treatment Act 2007 which enables children who suffer from asthma or anaphylaxis to carry and self-administer their asthma or anaphylaxis medication.
- Increased the number of school-based asthma education programs
- Increased the number of child care providers trained in asthma management
- Developed a series of educational videos "Asthma in the Elderly" "Asthma in Children" Asma en nuestra Comunidad (Asthma in Our Community) Spanish video. Videos are still airing on Public Access Television
- Facilitated Asthma Town Hall discussion on Asthma aired on WHUR TV
- Initiated an unprecedented Asthma Quality Improvement initiative which may become a national model for asthma management

METHODS FOR MORTALITY REPORT

This report represents the release of final District of Columbia resident mortality statistics for 2005 and presents death and death rates according to a number of demographic and medical characteristics. Data from this report are based on information from all resident death certificates filed in the District of Columbia (D.C.) and in other states (e.g., information from a death certificate for a D.C. resident who died in the state of Maryland is included in this report). Cause-of-death statistics presented in this report are classified in accordance with the *International Classification of Diseases Tenth Revision (ICD-10)* (World Health Organization. *International Statistical Classification of Diseases and Related Health Problems, Tenth Revision*. Geneva: World Health Organization. 1992.)

Measures of mortality in this report include life expectancy; the number of deaths; crude, age-specific, and age-adjusted death rates. The populations used to calculate death rates for 2005 shown in this report were produced under a collaborative arrangement with the D.C. Office of Planning, State Data Center and the U.S. Census Bureau and are based on counts for the 2000 census and 2005 estimated population. Reflecting the new guidelines issued in 1997 by the Office of Management and Budget (OMB), the 2000 census included an option for individuals to report more than one race as appropriate for themselves and household members (Office of Management and Budget. Revisions to the standards for the classification of Federal data on race and ethnicity. Federal Register 62FR58782-58790. October 30, 1997. Available at: <http://www.whitehouse.gov/omb/fedreg/ombdir15.html>.)

Mortality data in this report can be used to monitor and evaluate the health status of the District of Columbia in terms of current mortality levels and long-term mortality trends, as well as to identify segments of the D.C. population at greatest risk of death from specific diseases and injuries. Differences in death rates among demographic groups, including racial and ethnic groups, may reflect group differences in factors such as socioeconomic status, access to medical care, and the prevalence of risks specific to a particular group.

MORTALITY

This section presents information on mortality from the District of Columbia vital records system. Data are presented on total number of deaths, leading causes of death (Figure 1 and Table 2), premature mortality, including infant mortality and mortality among the elderly by age, gender (Table 3), race (Table 4, and ward (Table 5).

In 2005, there were 5,477 deaths to residents of the District of Columbia. This represented a crude death rate of 941.0 per 100,000 population and an age-adjusted rate of 932.9 per 100,000 U.S. 2000 standard population. The age-adjusted death rate eliminates the effects of the aging of the population per 100,000 U.S. standard population. The District's crude and age-adjusted death rates are higher than the national rate but declining since 1994. The crude death rate for the United States in 2005 was 825.9 per 100,000 population and the age-adjusted death rate was 798.8 per 100,000 population. In the District of Columbia, the 2005 crude death rate for males (1,019.9 per 100,000) was considerably higher than for females (870.4 per 100,000) (Table 3), and the 2005 rate for blacks/African Americans (1,254.0 per 100,000) was significantly higher than for whites (544.3 per 100,000) (Table 4).

**Table 2. Age-Adjusted Death Rates by
Ten Leading Causes of Death:
District of Columbia and United States, 2005**

District of Columbia		United States	
Cause of Death	Rate*	Cause of Death	Rate*
1. Heart Disease	258.1	1. Heart Disease	211.1
2. Malignant Neoplasms (Cancer)	197.1	2. Malignant Neoplasms (Cancer)	183.8
3. Cerebrovascular Diseases	39.2	3. Cerebrovascular Diseases	46.6
4. HIV/AIDS	35.9	4. Chronic Lower Respiratory	43.2
5. Accidents	34.6	5. Accidents	39.1
6. Diabetes	32.9	6. Diabetes	24.6
7. Assault (Homicide)	28.4	7. Alzheimer's Disease	22.9
8. Chronic Lower Respiratory Diseases	23.2	8. Influenza/Pneumonia	20.3
9. Septicemia	22.0	9. Nephritis, Nephrotic Syndrome & Nephrosis	14.3
10. Alzheimer's Disease	18.5	10. Septicemia	11.2

*Age-Adjusted rates per 100,000 U.S. standard population based on 2005 population estimates.
Sources: (1) DC Department of Health, Center for Policy, Planning, and Epidemiology, State Center for Health Statistics, 2008. (2) Population Division, U.S. Census Bureau, May 17, 2007

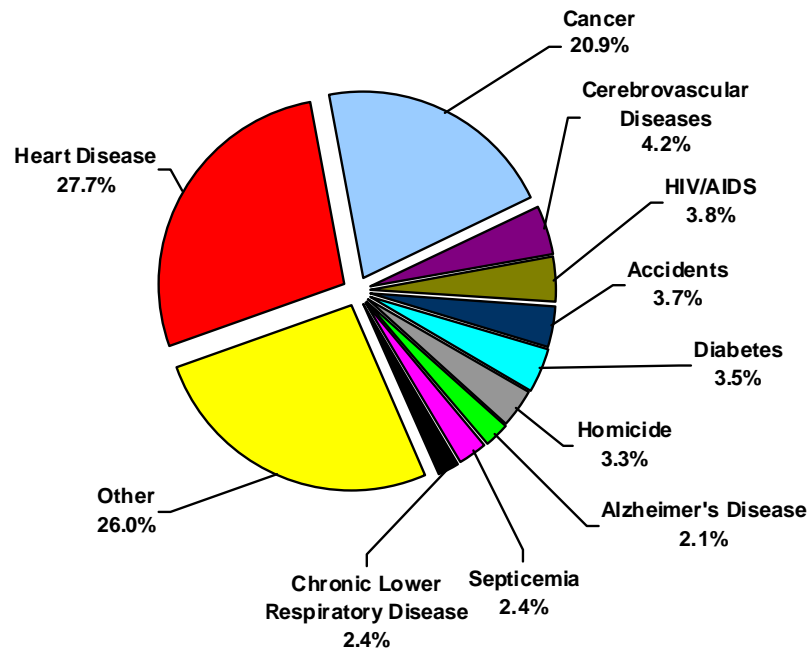
The ten leading causes of death in the District of Columbia in 2005 ranked in order were heart disease, cancer, cerebrovascular diseases, HIV/AIDS, accidents, diabetes, assault (homicide), chronic lower respiratory diseases, septicemia, and Alzheimer's disease (Figure 1 and Table 2). These 10 causes accounted for 74 percent of all District resident deaths in 2005.

LEADING CAUSES OF DEATH

In the 20th century, chronic diseases, including heart disease, cerebrovascular disease, cancer, and diabetes have replaced infectious disease as the leading causes of death and disability in industrial countries. Heart disease and cancer are two leading causes of premature death among District residents as well as Americans aged 45 to 64 years. Nationally, blacks/African Americans are at greater risk of mortality from these chronic diseases than any other group in this age range. The differences in the death rates from chronic disease account for most of the disparity in the chance of survival to age 65 between blacks/African Americans and whites (Council of Economic Advisors, 1998). However, in this section, the ten leading causes of death will be discussed. The five leading causes and diabetes accounted for 63.8 percent of all deaths to District residents in 2005.

A disproportionate number of deaths occurred among blacks/African Americans (76.3 percent on average) in comparison to their share of the total population (approximately 60 percent). The top two leading causes of deaths for black/African American and white residents in 2005 were heart disease and cancer (Table 4). Heart disease was the leading cause of death for both men (261.6 per 100,000) and women (259.8 per 100,000) followed by cancer (221.2 for men and 174.8 for women) (Table 3).

Figure 1. Ten Leading Causes of Death in the District of Columbia, 2005



Source: DC Department of Health, Center for Policy, Planning, and Epidemiology, State Center for Health Statistics, 2008

The following section provides more detailed information on the ten leading causes of death and diabetes (Tables 3, 4, and 5 and Figure 2).

**Table 3. Ten Leading Causes of Death and Death Rates* by Gender:
District of Columbia Residents, 2005**

Causes of Death	Male	Rate*	Causes of Death	Female	Rate*
Total Deaths	2,803	1,019.9	Total Deaths	2,674	870.4
Heart Disease	719	261.6	Heart Disease	798	259.8
Cancer	608	221.2	Cancer	537	174.8
Homicide	163	59.3	Cerebrovascular Diseases	137	44.6
Accidents	133	48.4	Diabetes	100	32.6
HIV/AIDS	127	46.2	Alzheimer's Disease	81	26.4
Cerebrovascular Diseases	93	33.8	HIV/AIDS	80	26.0
Diabetes	90	32.7	Septicemia	78	25.4
Chronic Lower Respiratory	63	22.9	Accidents	72	23.4
Septicemia	52	18.9	Chronic Lower Respiratory	71	23.1
Chronic Liver Disease and Cirrhosis	49	17.8	Influenza/Pneumonia	53	17.3
All Other Causes	706	256.9	All Other Causes	667	217.1

*Crude death rates are per 100,000 population based on 2005 population estimates.

Source: DC Department of Health, Center for Policy, Planning, and Epidemiology, State Center for Health Statistics, 2008.

**Table 4. Ten Leading Causes of Death and Death Rates* by Race:
District of Columbia, 2005**

Causes of Death	Black	Rate*	Causes of Death	White	Rate*
Total Deaths	4,180	1,254.0	Total Deaths	1,193	544.3
Heart Disease	1,161	348.3	Heart Disease	321	146.5
Cancer	831	249.3	Cancer	297	135.5
HIV/AIDS	183	54.9	Accidents	59	26.9
Cerebrovascular Diseases	170	51.0	Cerebrovascular Diseases	58	26.5
Diabetes	168	50.4	Chronic Lower Respiratory Diseases	41	18.7
Homicide	167	50.1	Alzheimer's Disease	39	17.8
Accidents	143	42.9	HIV/AIDS	24	10.9
Septicemia	110	33.0	Influenza/Pneumonia	24	10.9
Chronic Lower Respiratory Diseases	91	27.3	Diabetes	20	9.1
Alzheimer's Disease	74	22.2	Septicemia	19	8.7
All Other Causes	1,082	324.6	All Other Causes	277	126.4

*Crude death rates per 100,000 population based on 2005 estimated population.

Source: DC Department of Health, Center for Policy, Planning, and Epidemiology, State Center for Health Statistics, 2008.

**Table 5. Number and Rate of Ten Leading Causes of Death by Ward:
District of Columbia Residents, 2005 ^{1,2}**

Causes of Death	All Causes	Ward 1	Ward 2	Ward 3	Ward 4	Ward 5	Ward 6	Ward 7	Ward 8
Total Deaths	5,477	486	601	549	922	880	635	801	568
Rate per 100,000 pop.	941.0	607.4	725.5	690.0	1,291.4	1,322.4	970.1	1,237.9	923.1
1. Heart Disease	1,517	131	176	160	267	244	167	213	146
Rate per 100,000 pop.	260.6	163.7	212.4	201.1	374.0	366.7	255.1	329.2	237.3
2. Cancer	1,145	109	131	133	195	187	128	148	110
Rate per 100,000 pop.	196.7	136.2	158.1	167.2	273.1	281.0	195.5	228.7	178.8
3. Cerebrovascular	230	21	20	34	40	42	20	36	14
Rate per 100,000 pop.	39.5	26.2	24.1	42.7	56.0	63.1	30.6	55.6	22.8
4. HIV/AIDS	207	29	16	3	18	41	27	37	33
Rate per 100,000 pop.	35.6	36.2	19.3	3.8	25.2	61.6	41.2	57.2	53.6
5. Accidents	205	21	24	22	30	19	32	34	20
Rate per 100,000 pop.	35.2	26.2	29.0	27.7	42.0	28.6	48.9	52.5	32.5
6. Diabetes	190	12	22	8	31	30	25	41	21
Rate per 100,000 pop.	32.6	15.0	26.6	10.1	43.4	45.1	38.2	63.4	34.1
7. Homicide	183	15	14	-	16	33	23	35	47
Rate per 100,000 pop.	31.4	18.7	16.9	-	22.4	49.6	35.1	54.1	76.4
8. Chronic Lower Resp.	134	14	16	18	22	19	7	16	20
Rate per 100,000 pop.	23.0	17.5	19.3	22.6	30.8	28.6	10.7	24.7	32.5
9. Septicemia	130	9	6	9	24	26	15	25	14
Rate per 100,000 pop.	22.3	11.2	7.2	11.3	33.6	39.1	22.9	38.6	22.8
10. Alzheimer's Disease	113	8	17	23	29	18	3	10	5
Rate per 100,000 pop.	19.4	10.0	20.5	28.9	40.6	27.0	4.6	15.5	8.1
All Other Causes	1,423	117	159	139	250	221	188	206	138

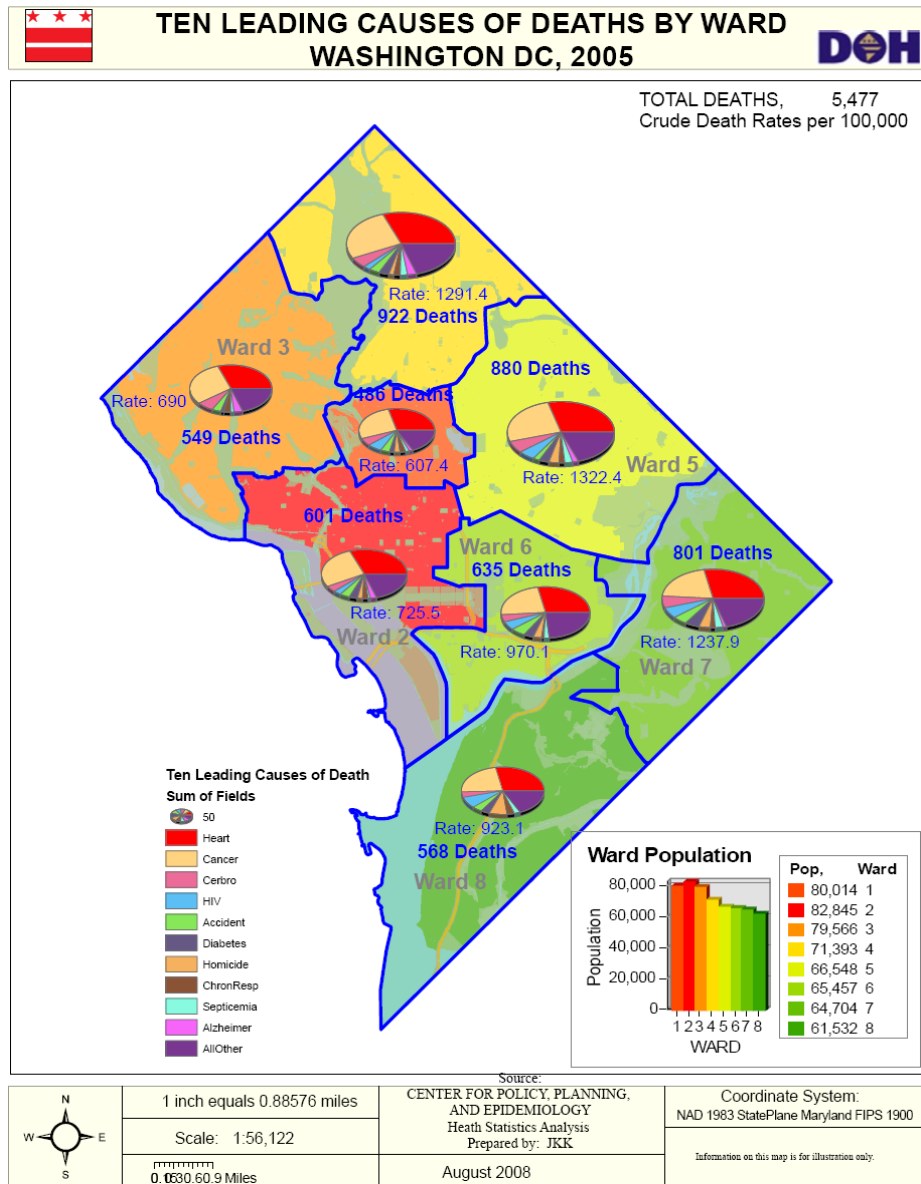
Notes: (1) Crude death rates are per 100,000 population based on 2005 population estimates for the city and 2000

Census population by ward.

(2) Green shaded areas show the highest death rates and yellow areas show the lowest death rates by ward and disease.

Source: DC Department of Health, Center for Policy, Planning, and Epidemiology, State Center for Health Statistics, 2008.

Figure 2.



Source: DC Department of Health, Center for Policy, Planning, and Epidemiology, State Center for Health Statistics, 2008.

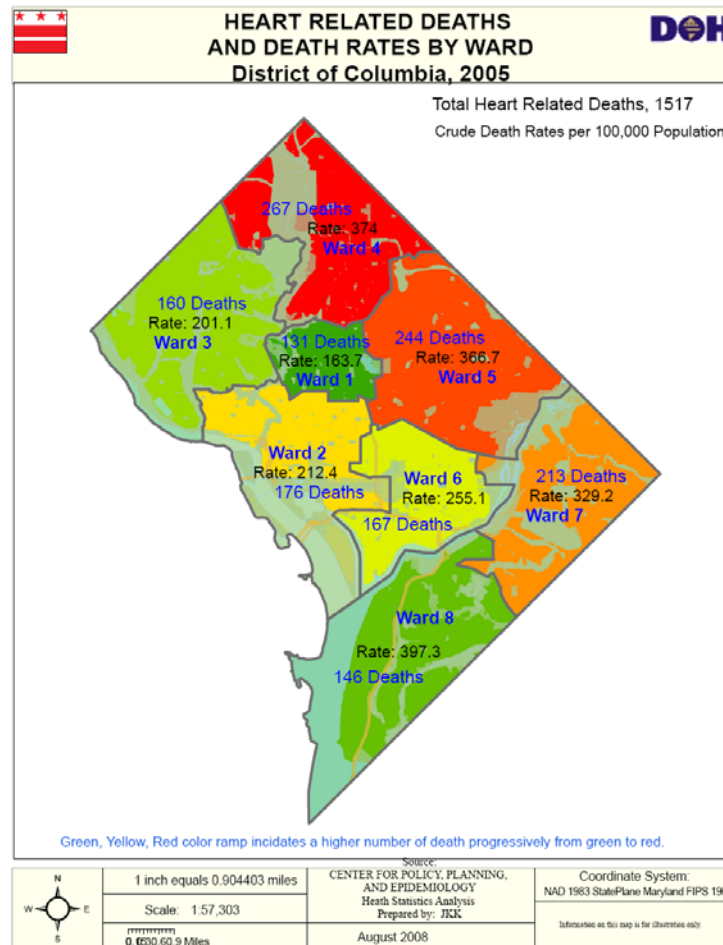
1. Heart Disease

(DC Healthy People 2010 Chapter 15, Objectives 15-1 through 15-8; Healthy People 2010 Chapter 12, Objectives 12-1 through 12-6)

Heart disease was the leading cause of death both in the District of Columbia and the United States. Although deaths due to heart disease have declined nationally by nearly one-third since 1980, most likely due to life style changes and improved medical technology, heart disease still kills almost as many people as do all the diseases combined (Brownson et al., 1998). Among District residents in 2005, heart disease had the highest mortality rate (age-adjusted 258.1 per 100,000 population and crude rate 260.6 per 100,000), killing 1,517 people equal to 27.7 percent of all resident deaths (Figure 1 and Table 3). Heart disease is the leading cause of death both for women (259.8 per 100,000) and men (261.6 per 100,000). The highest mortality rate was for blacks/African Americans (348.3 per 100,000), followed by whites (146.5) (Table 4).

The crude death rate for heart disease was the highest for Ward 4 (374.0 per 100,000), followed by Ward 5 (366.7 per 100,000), and the lowest for Ward 1 (163.7 per 100,000). This difference may also reflect the age of the population—Wards 4 and 5 have older populations, while Ward 1 has a younger population suggesting differences in age-specific deaths, in general, and by ward in particular (Figure 3 and Table 5).

Figure 3.



Source: DC Department of Health, Center for Policy, Planning, and Epidemiology, State Center for Health Statistics, 2008

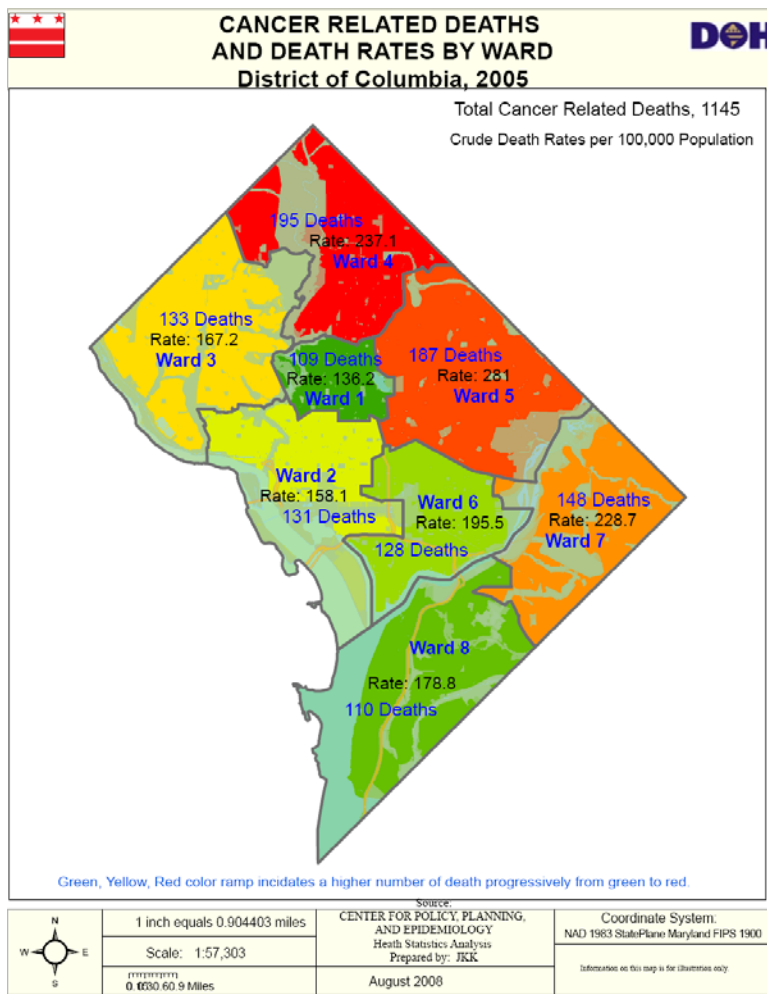
2. Cancer

(DC Healthy People 2010 Chapter 12 Objectives 12:1-4; Healthy People 2010 Chapter 3. Objectives 3:2-5, 3-7)

Cancer was the second-ranked leading cause of death in both the United States and the District of Columbia. Of the 5,477 District resident deaths in 2005, 1,145 (20.9 percent) or about one in five died from cancer with a crude death rate of 196.7 per 100,000 and an age-adjusted rate of 197.1 per 100,000 (Tables 2 and 5). With more than 3,000 new cases of cancer reported each year, the District of Columbia has the highest incidence rate of cancer and ranks higher overall in cancer mortality rates in the U.S. (DOH, 2000). Incidence and mortality rates are highest for blacks/African Americans who account for a majority of the District's residents. Blacks/African Americans had a mortality rate of 249.3 per 100,000, which was almost twice that of whites (135.5 per 100,000).

Cancer affects residents in every ward, but Ward 5 (281.0 per 100,000) had the highest rate of deaths, followed by Ward 4 (237.1 per 100,000), Ward 7 (228.7), and Ward 6 (195.5). Ward 1 had the lowest cancer mortality rate of 136.2 per 100,000, again a reflection partly of the young age of the population in this ward (Figure 4 and Table 5).

Figure 4.



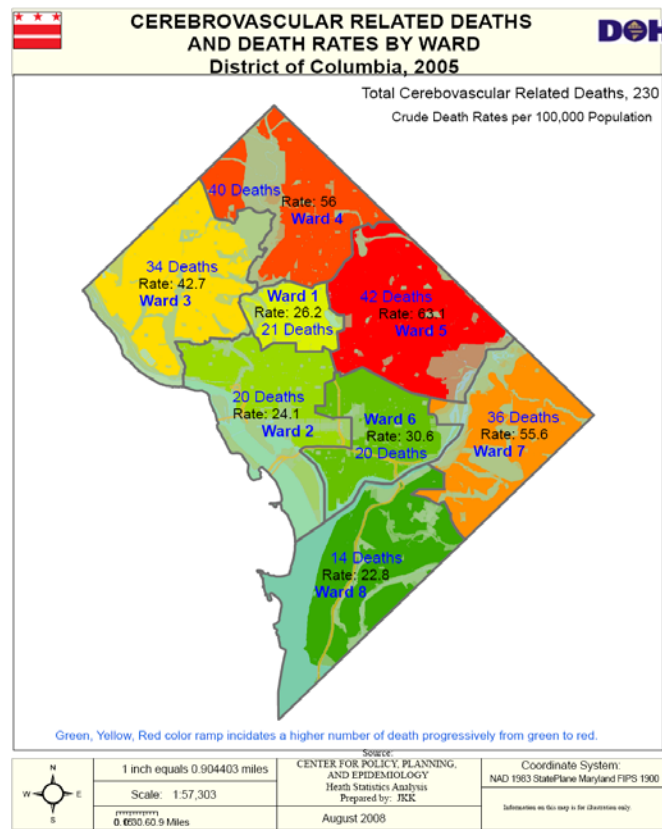
Source: DC Department of Health, Center for Policy, Planning, and Epidemiology, State Center for Health Statistics, 2008.

3. Cerebrovascular Diseases

(DC Healthy People 2010 Chapter 15; Healthy People 2010 Chapter 12. Objectives 12-7 through 12-8)

Cerebrovascular disease (age-adjusted rate of 39.2 per 100,000 population), which causes stroke, was the third leading cause of death in 2005 and also ranked third (age-adjusted rate of 46.6 per 100,000 population) in the United States (Table 2). It was the number one cause of disability, with blacks/African Americans more than twice as likely to suffer cerebrovascular diseases as whites and more women dying from cerebrovascular diseases each year than from breast cancer (DOH, 2000). In 2005, the crude death rate for cerebrovascular diseases was 39.5. A greater proportion of whites than blacks/African Americans die each year from cerebrovascular diseases (approximately 4.9 percent vs. 4.1 percent). In addition, more women than men regardless of race die each year from cerebrovascular diseases (5.1 percent vs. 3.3 percent). In 2005, the crude death rate for cerebrovascular diseases by ward shows Wards 5 (63.1), 4 (56.0), and 7 (55.6), respectively, had the highest rates (Figure 5 and Table 5). According to the National Institute of Neurological Disorders and cerebrovascular diseases (2001), the majority of cerebrovascular diseases can be prevented by management of hypertension, heart disease, and diabetes, and by proper nutrition and smoking cessation. Transient ischemic attacks (TIAs), commonly referred to as “mini-strokes”, are events lasting only a few minutes or hours and are warning signs of a major cerebrovascular disease and should not be ignored. Timely diagnosis of TIAs and other risk factors is needed to prevent cerebrovascular diseases, and immediate treatment can minimize the long-term disabling effects of a cerebrovascular accident such as paralysis and speech deficits. Again, the mortality data suggest that District residents in general and black/African American residents in particular, often lack access to or under-utilize available life-saving interventions.

Figure 5.



Source: DC Department of Health, Center for Policy, Planning, and Epidemiology, State Center for Health Statistics, 2008.

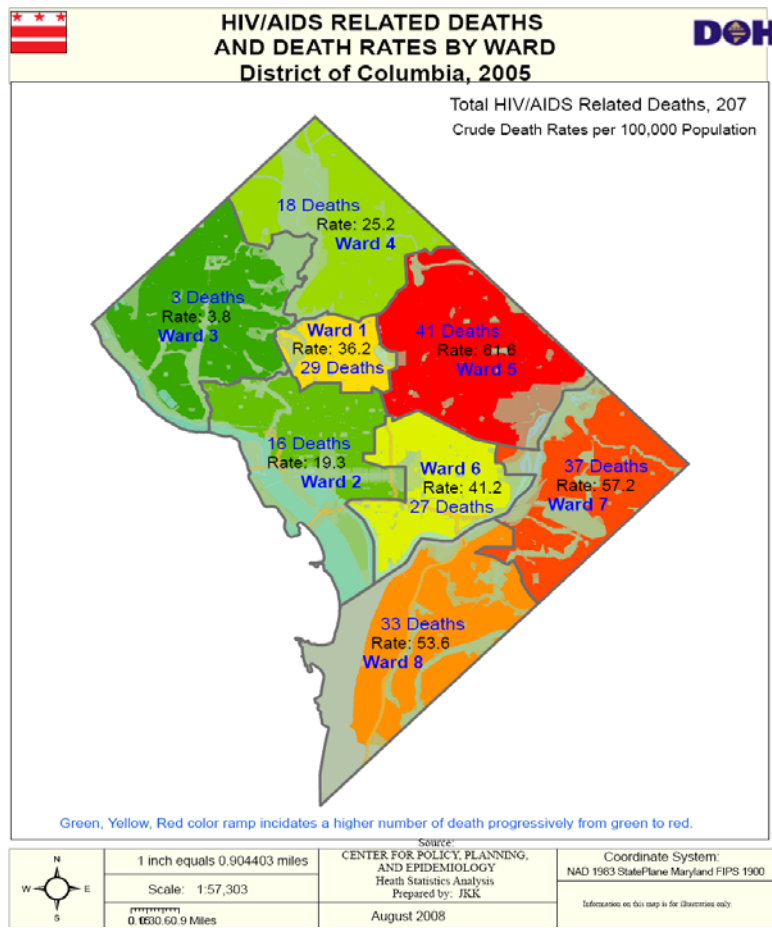
4. HIV/AIDS

(DC Healthy People 2010 Chapter 16 16-1 through 16-7; Healthy People 2010 Chapter 13, Objectives 13-1, 13-8, 13-10, 13-13 through 113-16)

Acquired immune deficiency syndrome (AIDS) is caused by the human immunodeficiency virus (HIV) and ranked as the fourth leading cause of death in the District for 2005. Nationally, HIV/AIDS (age-adjusted rate 4.2 per 100,000 population) has not been on the list of 15 leading causes of death since 1997 (NCHS, vol 50 no 15, 2002). The crude death rate for the District in 2005 was 35.6 per 100,000 population. The age-adjusted mortality rate for HIV/AIDS in the District of Columbia was 35.9 in 2005 (Table 2). Mortality rates for HIV/AIDS in the District are higher in blacks/African Americans than in any other race or ethnic group. In 2005, the crude death rate for blacks/African Americans was 54.9 per 100,000 compared with only 18.0 per 100,000 for the U.S. The crude death rate is much lower in the white population (10.9 per 100,000) (Table 4). Males continue to be infected at considerably higher rates than females, although the number of infected females is rapidly rising.

Consistent with the United States, deaths among people with HIV/AIDS continue to decline in the District. A disproportionate number of deaths occurred in Ward 5 (61.6) and Ward 7 (57.2). As there were only three HIV/AIDS deaths in Ward 3 (Figure 6 and Table 5), the mortality rate may not be reliable.

Figure 6.



Source: DC Department of Health, Center for Policy, Planning, and Epidemiology, State Center for Health Statistics, 2008.

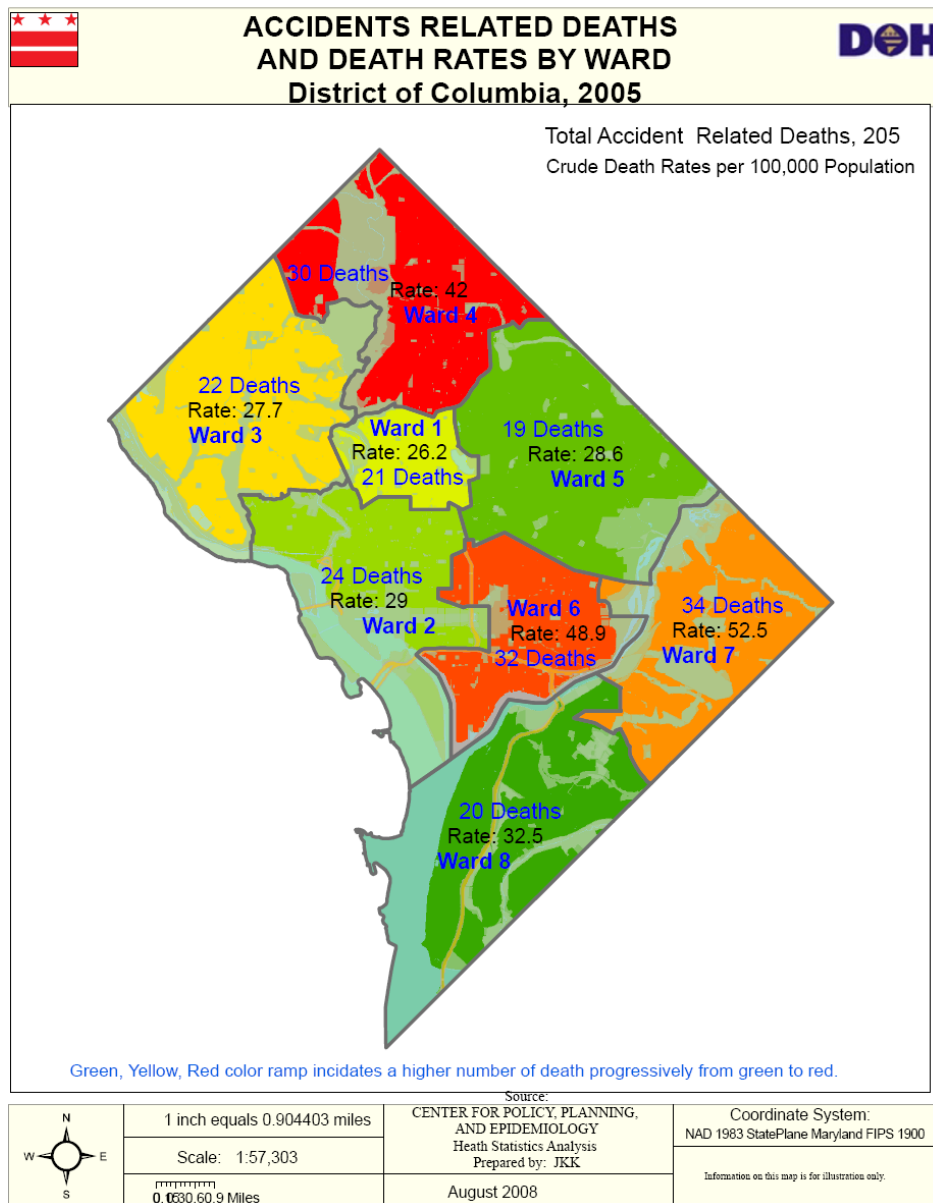
5. Accidents

(Healthy People 2010 Chapter 15, Objectives 15-13, 15-15 through 15-16, 15-25, 15-27)

Accidents ranked fifth in the District of Columbia. In 2005, the age-adjusted mortality rate for accidents (unintentional injuries) of 34.6 per 100,000 population, was lower than the age-adjusted rate of 39.1 per 100,000 for the U.S. (Table 2). More men tend to die from accidents (48.4 per 100,000) compared to women (23.4 per 100,000) (Table 3) and blacks/African Americans die at a higher rate than their white counterparts (42.9 vs. 26.9) (Table 4).

Residents who lived in Ward 7 (52.5 per 100,000) had the highest mortality rate compared to Ward 1 (26.2), which had the lowest rate (Figure 7 and Table 5).

Figure 7.



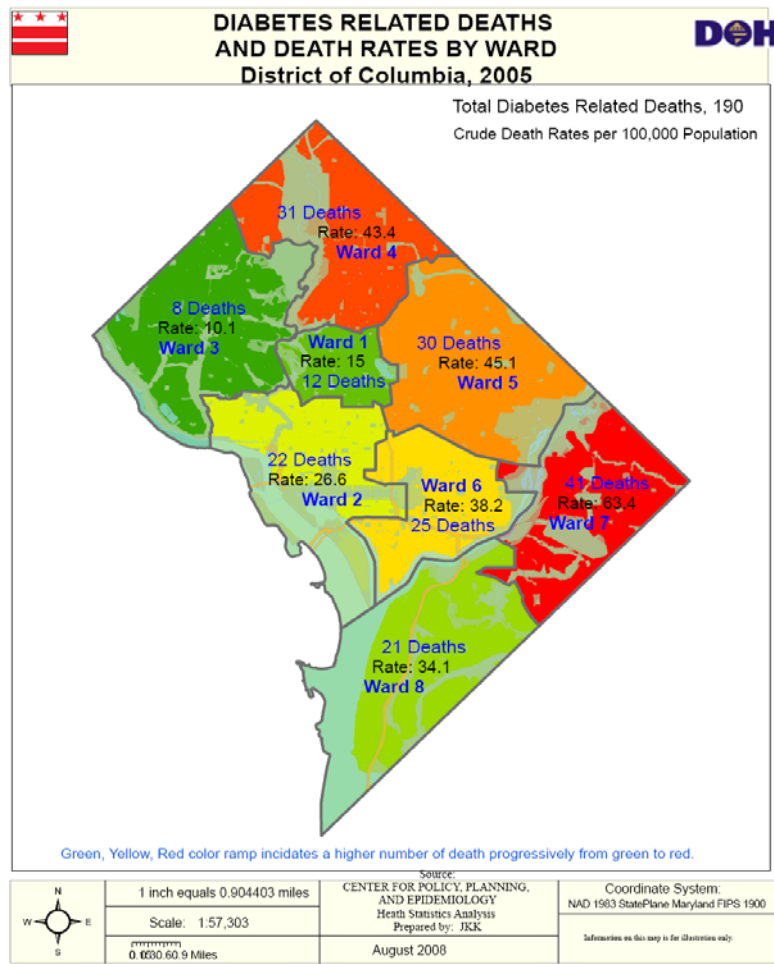
Source: DC Department of Health, Center for Policy, Planning, and Epidemiology, State Center for Health Statistics, 2008.

6. Diabetes

(DC Healthy People 2010 Chapter 13, Objectives 13-1 through 13-11; Healthy People 2010 Chapter 5, Objectives 5-1 through 5-3, 5-5, 5-9, 5-12, 5-13, 5-17)

Diabetes (age-adjusted rate of 32.9) ranked sixth in the District of Columbia and also sixth (age-adjusted rate of 24.6) in the United States in 2005 (Table 2). Diabetes is discussed along with the five leading causes of death because it is a chronic disease known to disproportionately afflict minorities, particularly American Indians, Mexican Americans, and other Hispanics, as well as African Americans. Lack of timely, appropriate medical care may contribute to the complications of diabetes, such as lower extremity amputations, end stage renal disease, heart disease, cerebrovascular diseases, high blood pressure, and blindness. It also contributes to the number of premature deaths in the United States and the District. As many diabetics actually die from complications of diabetes, rather than the disease itself, diabetes deaths alone understate the extent to which diabetes contributes to mortality. The crude death rate for diabetes in 2005 was 32.6. Adult African Americans are 1.7 times as likely to have diabetes as non-Hispanic whites, while Mexican Americans and other Latinos are almost twice as likely to have the disease, and American Indians and Alaskan Natives are 2.8 times as likely (CDC Diabetes Fact sheet, 1998). Diabetes disproportionately afflicted the population in Ward 7, with the highest death rate of 63.4. Ward 3 had the lowest mortality rate (10.1) in 2005 (Figure 8 and Table 5).

Figure 8.



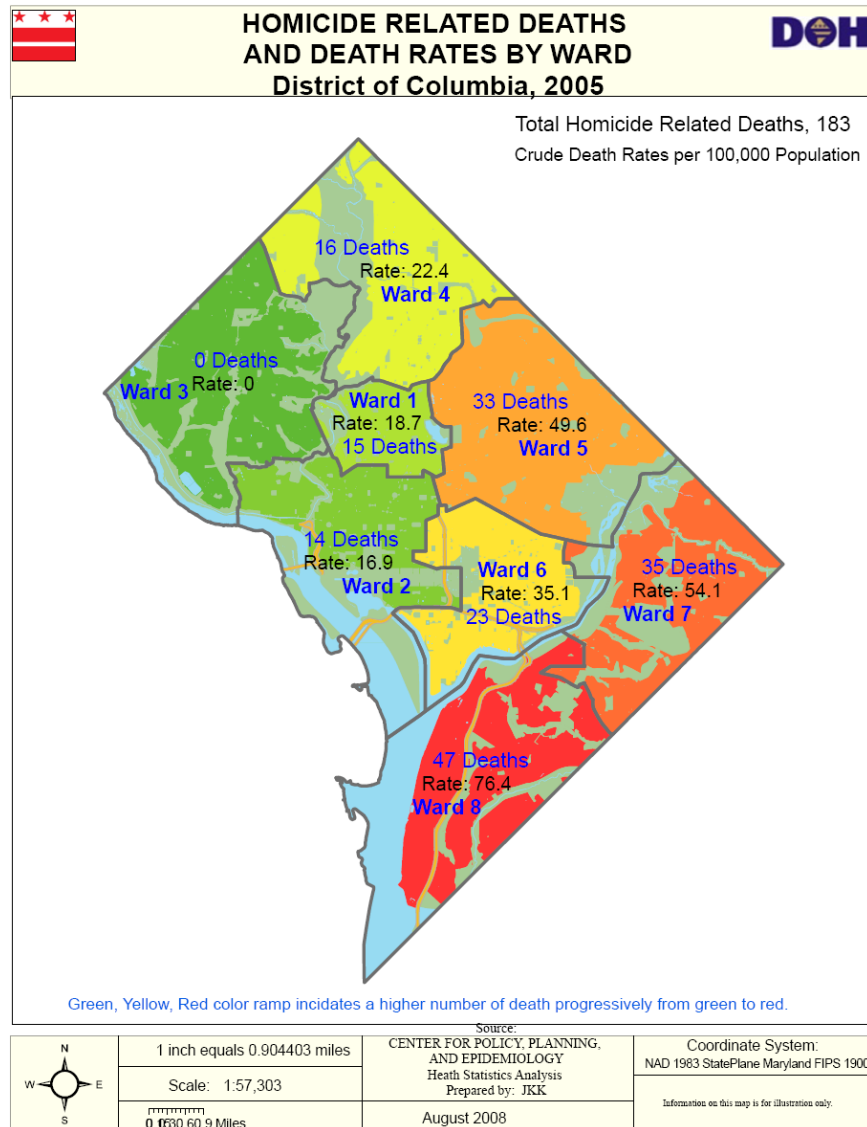
Source: DC Department of Health, Center for Policy, Planning, and Epidemiology, State Center for Health Statistics, 2008.

7. Homicide

(Healthy People 2010 Chapter 15, Objectives 15-32)

Homicide was the seventh leading cause of death in the District of Columbia in 2005. The age-adjusted death rate in the District was 28.4 per 100,000 compared to 6.1 nationally (Table 2). For men, homicide was the third leading cause of death (59.3) while it was not in the top 10 leading causes of death for women (Table 3). Homicide was the sixth cause of death for blacks/African Americans (50.1) but was not in the top 10 causes of death for whites (Table 4). Ward 8 had the highest rate of homicide (76.4) compared to Ward 3, which reported no homicides (Figure 9 and Table 5).

Figure 9.



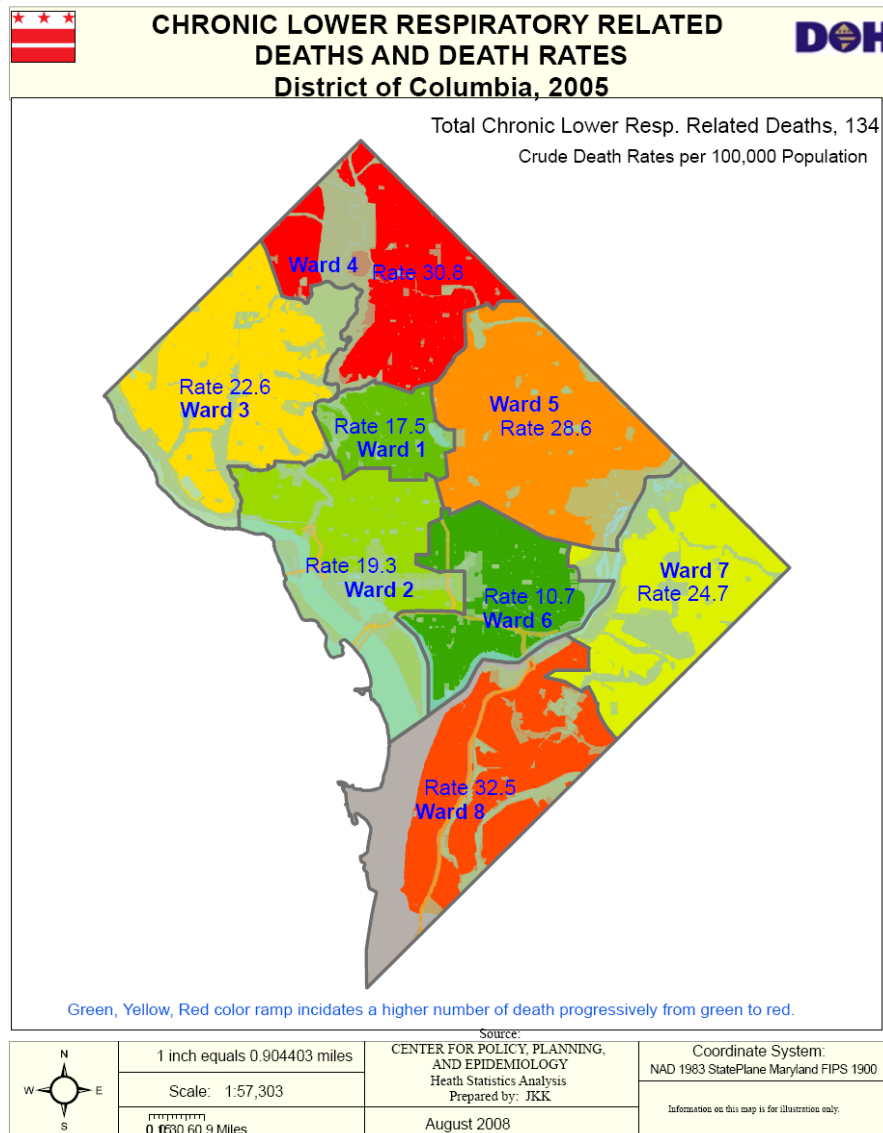
Source: DC Department of Health, Center for Policy, Planning, and Epidemiology, State Center for Health Statistics, 2008.

8. Chronic Lower Respiratory Disease

(Healthy People 2010 Chapter 24, Objectives 24-10)

Chronic Lower Respiratory Diseases (CLRD) such as chronic obstructive pulmonary disease (COPD) was ranked the eighth leading cause of death in the District of Columbia in 2005. The age-adjusted death rate was 23.2 per 100,000 compared to the fourth leading cause of death (age-adjusted mortality rate of 43.2) nationally (Table 2). Although CLRD was the ninth leading cause of death for blacks/African Americans but was the fifth cause of death for whites, the crude death rate was higher for blacks/African Americans (27.3) than for whites (18.7) (Table 4). Men and women were affected by this disease about the same rate (Table 3). Ward 8 had the highest rate of 32.5 per 100,000. Ward 6 had the lowest mortality rate of 10.7 per 100,000 (Figure 10 and Table 5).

Figure 10.

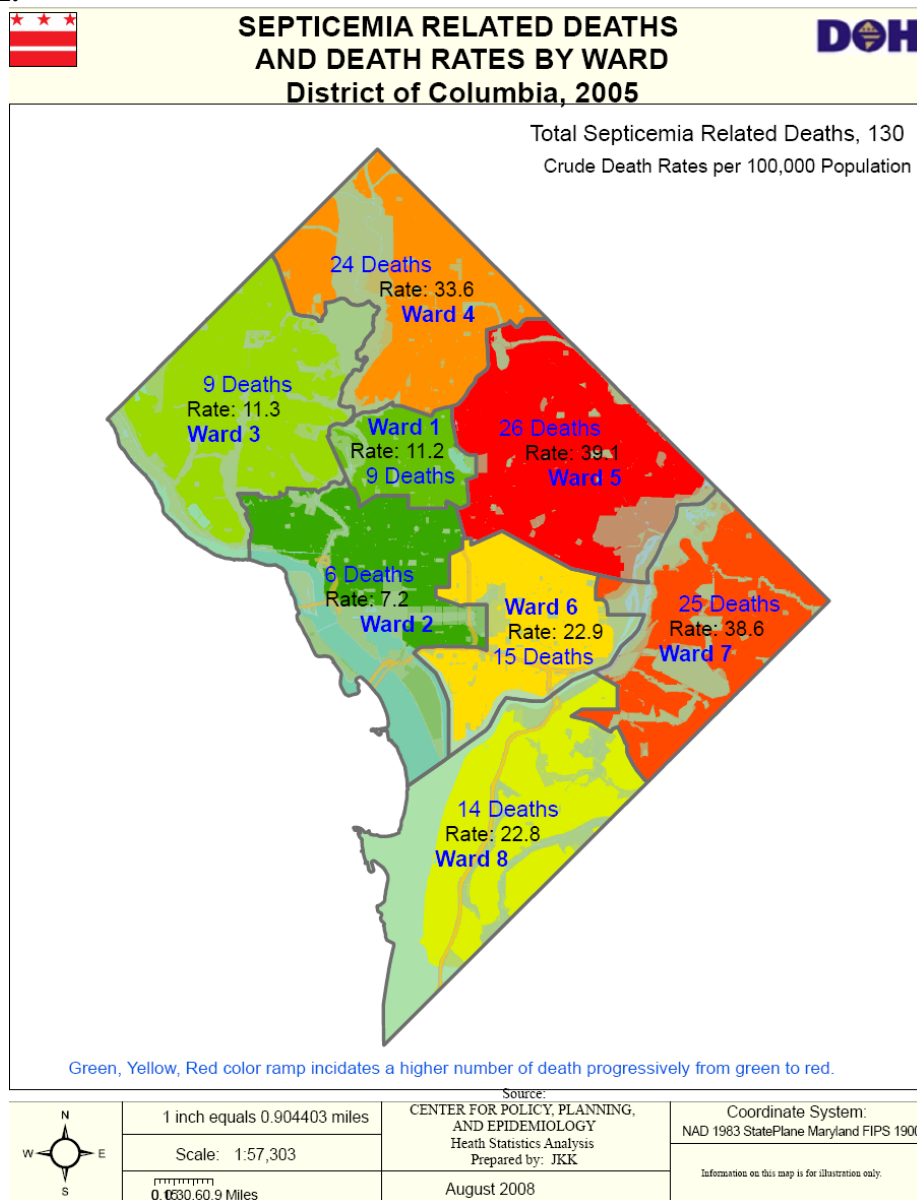


Source: DC Department of Health, Center for Policy, Planning, and Epidemiology, State Center for Health Statistics, 2008.

9. Septicemia

In 2005, Septicemia infections causing failure of multiple vital organs such as the kidney, heart and lung, was the ninth leading cause of death with an age-adjusted mortality rate of 22.0 per 100,000 in the District of Columbia. The national age-adjusted mortality rate was 11.2, which ranked as the 10th leading cause of death (Table 2). Septicemia was higher among women (25.4) than men (18.9) (Table 3). Blacks/African Americans (33.0 per 100,000) were almost four times more likely to die from Septicemia than their white (8.7) counterparts in the District of Columbia (Table 4). Ward 5 had the highest rate (39.1) where as Ward 2 had the lowest rate (7.2) (Figure 11 and Table 5).

Figure 11.

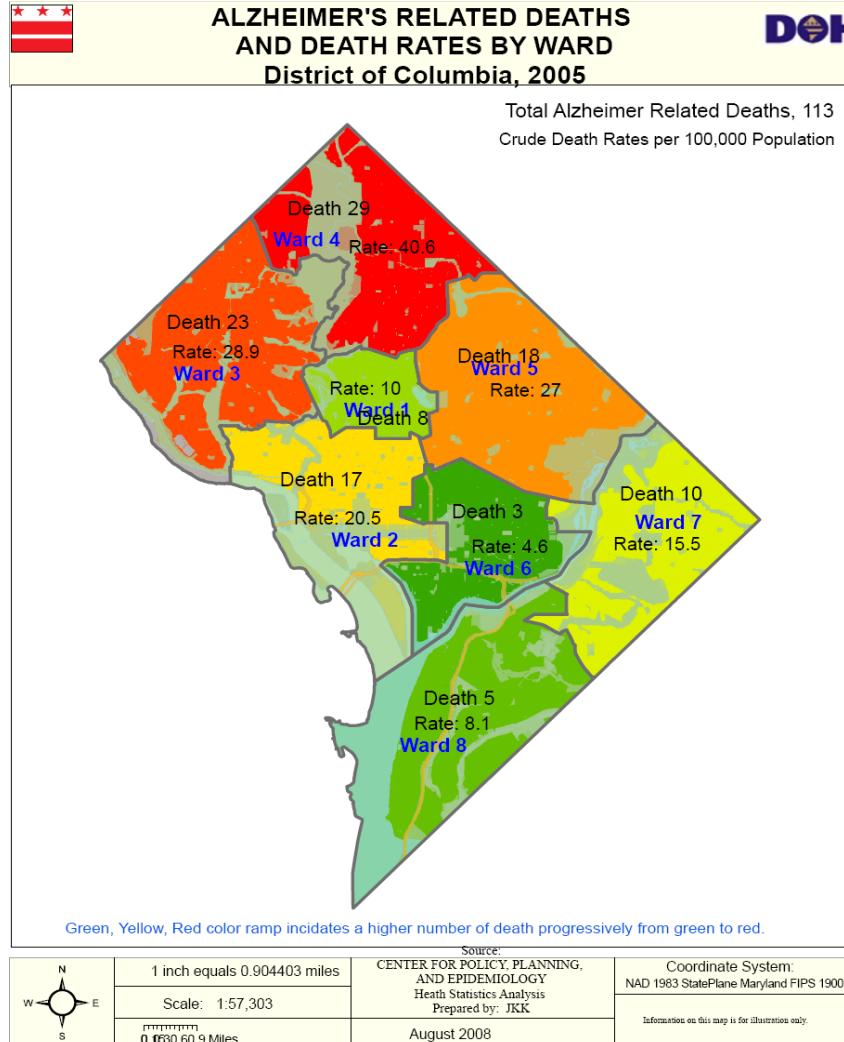


Source: DC Department of Health, Center for Policy, Planning, and Epidemiology, State Center for Health Statistics, 2008.

10. Alzheimer's Disease

Alzheimer's disease was ranked the 10th leading cause in the District of Columbia in 2005 with an age-adjusted rate of 18.5 per 100,000. In contrast, Alzheimer's ranked seventh nationally with an age-adjusted rate of 22.9 (Table 2). According to the National Center for Health Statistics (NCHS, 2008), the mortality trend for Alzheimer's disease is one of rapid increase. From 1979 to 1998, the rate for Alzheimer's disease increased dramatically because of factors such as improvements in diagnosis and awareness of the condition within the medical community. The transition from ICD-9 to ICD-10 brought substantial changes to the coding and selection rules for this condition, which created a major disruption in the time series trend for Alzheimer's disease between 1998 and 1999. The large increase in the Alzheimer's disease mortality between 1998 and 1999 is partly due to the ICD transition (NCHS, 2001). Table 4 shows that Alzheimer's disease was the 10th leading cause among blacks/African Americans but the 6th leading cause among whites. The crude death rate for blacks/African Americans (22.2) was higher than for whites (17.8). Ward 4 had the highest mortality rate of 40.6 per 100,000 compared to Ward 6 (4.6), which had the lowest mortality rate (Figure 12 and Table 5).

Figure 12.



Source: DC Department of Health, Center for Policy, Planning, and Epidemiology, State Center for Health Statistics, 2008.

PREMATURE DEATHS

Chronic diseases, including heart disease, cerebrovascular disease, cancer, and diabetes, account for 56.3 percent of all deaths in the District of Columbia in 2005. Today, influenza, pneumonia, and HIV/AIDS are the only remaining infectious diseases accounting for a significant percentage of deaths in the District. In an analysis of the death certificate data in 2005, 45.7 percent of all deaths of District residents occurred before the age of 70 years. In 2005, the average life expectancy at birth for the United States was 77.8 years; therefore, any death occurring before the age of 70 can be considered premature.

**Table 6. Leading Causes of Premature Deaths Under Age 70 Years
District of Columbia Residents, 2005**

Cause and Rank	Number	Percent*		Cause and Rank	Number	Percent*
All Causes <70 Years				25-44 Years		
All Causes	2,501	100.0		All Causes	468	100.0
1. Cancer	542	21.7		1. HIV/AIDS	85	18.2
2. Heart Disease	503	20.1		2. Homicide	81	17.3
3. HIV/AIDS	201	8.0		3. Heart Disease	54	11.5
4. Homicide	177	7.1		4. Accidents	49	10.5
5. Accidents	143	5.7		5. Cancer	47	10.0
Others causes	1,018	40.7		Other causes	152	32.5
1-14 Years				45-64 Years		
All causes	24	100.0		All causes	1,385	100.0
1. Homicide	5	20.8		1. Cancer	343	24.8
2. Cancer	3	12.5		2. Heart Disease	308	22.2
3. Accidents	2	8.3		3. Accidents	62	4.5
Other causes	14	58.3		4. Cerebrovascular Disease	50	3.6
				5. Diabetes	45	3.2
15-19 Years				Other causes	577	41.7
All causes	48	100.0				
1. Homicide	25	52.1		65-69 Years		
2. Accidents	7	14.6		All causes	384	100.0
3. Cancer	4	8.3		1. Cancer	114	29.7
4. Heart Disease	2	4.2		2. Heart Disease	112	29.2
Other causes	10	20.8		3. Diabetes	24	6.3
				4. Cerebrovascular Disease	18	4.7
20-24 Years				5. Septicemia	11	2.9
All causes	84	100.0		Other causes	105	27.3
1. Homicide	49	58.3				
2. Accidents	14	16.7				
3. HIV/AIDS	3	3.6				
3. Heart Disease	3	3.6				
Other causes	15	17.9				

*Does not add to 100 due to rounding.

Source: State Center for Health Statistics, Center for Policy, Planning and Epidemiology DC Department of Health.

The average life expectancy, however, for D.C. residents for 1989-1991 was 68.0 years. In 2005, a total of 2,476 or 45.2 percent of all resident deaths occurred before age 70 years. Cardiovascular Diseases (i.e., heart disease and diseases of the arteries) and cancer accounted for 42.2 percent of premature deaths in 2005. These two major causes combined with infant mortality, HIV/AIDS, accidents, homicide, hypertension, and diabetes account for 72.4 percent of all premature deaths.

The leading causes of premature mortality (Table 6) in the District of Columbia follow a slightly different pattern from the leading causes of death for all ages (Table 5). In 2005, cancer was the leading cause of premature mortality, followed by heart disease, HIV/AIDS, homicide/assault, and accidents. These five leading causes accounted for 62.6 percent of all premature deaths.

ADULT MORTALITY: ELDERLY (65 Years and Older)

The 2000 U.S. census indicated the District was home to 69,898 elderly persons, who accounted for 12.2 percent of the total population (572,059). In 2005, the U. S. census estimated 71,251 elderly persons resided in the District of Columbia, who also accounted for 12.2 percent of the total estimated population (582,049). This figure included 35,688 individuals between 65 and 74 years of age, 25,127 between 75 and 84 years of age, and 10,436 individuals aged 85 years and older. As the population continues to live longer as predicted by the increasing life expectancy nationally, the need for health care among the elderly will increase. Three-quarters of all deaths in the United States occur among persons 65 years of age and older (Health United States, 2002). A total of 3,358 (61.3 percent) District residents who died in 2005 were 65 years of age and older. Chronic diseases have caused most of the deaths among the elderly (Tables 6 and 7). The leading cause of death among the elderly aged 65 years and older was heart disease, accounting for 34.1 percent of all deaths in this age range. The second leading cause of death for this age range was cancer (22.2 percent). The third leading cause of death for the elderly was cerebrovascular disease, followed by diabetes, and chronic lower respiratory diseases.

Cause and Rank	Number	Percent
All Causes	3,358	100.0
1. Heart Disease	1,148	34.1
2. Cancer	746	22.2
3. Cerebrovascular Disease	169	5.0
4. Diabetes	134	4.0
5. Chronic Lower Respiratory Disease	118	3.5
6. Alzheimer's Disease	109	3.3
7. Septicemia	103	3.2
8. Influenza/Pneumonia	71	2.1
9. Accidents	68	2.0
10. Nephritis	51	1.5
Other causes	641	19.1

Source: State Center for Health Statistics, Center for Policy, Planning and Epidemiology, DC Department of Health.

DISCUSSION

This report presents the 10 leading causes of death in the District of Columbia and the Department of Health program areas related to these causes of death. Cause-of-death ranking is a popular method of presenting mortality statistics and is a useful tool for illustrating the relative burden of cause-specific mortality, but it must be used cautiously with a clear understanding of the limitations underlying the method.

When comparing rankings across groups or over time, it is important to be aware of the age distribution of the populations being compared. Leading causes of death for populations with younger age distributions will tend to show higher ranking for causes of death that are prevalent among the young, such as homicide, unintentional injuries, and HIV infection. Leading causes for older populations will tend to show higher rankings for causes that are more prevalent among the elderly, such as Alzheimer's disease, heart disease, cancer, and cerebrovascular diseases.

Consideration should also be given to the effects of random variation on cause-of-death rankings. When the number of events is small (perhaps fewer than 100 deaths), estimates of mortality risk are subject to random fluctuations (see technical notes). Especially when comparing rankings based on small numbers of deaths between groups or over time, it is important to be aware that differences in relative rankings may be attributable to random variability.

TECHNICAL NOTES

Nature and sources of data

Data shown in this report for 2005 are based on 100 percent of the resident death certificates filed in the District of Columbia (DC) and DC resident deaths that occurred in other states through the inter-state exchange agreement. Data for DC were collected and reported using the 1989 revision until March 2005, when they began using the 2003 revision.

Mortality statistics are based on information coded by the states and provided to NCHS through the Vital Statistics Cooperative Program and from copies of the original certificates received by NCHS from the state registration offices.

The total DC resident death data were obtained from the State Center for Health Statistics. Vital statistics data for the United States were obtained from the National Vital Statistics Reports, Deaths: Final Data for 2005, Vol. 56, No. 10, April 24, 2008 (U.S. DHHS, CDC, NCHS).

Cause-of-death classification

The mortality statistics presented in this report were compiled in accordance with World Health Organization (WHO) regulations, which specify that member nations classify and code causes of death in accordance with the current revision of the International Classification of Diseases (ICD). The ICD provides the basic guidelines used in virtually all countries to code and classify causes of death. Effective with deaths occurring in 1999, the United States began using the Tenth Revision of this classification (ICD-10).

In this report, tabulations of cause-of-death statistics are based solely on the underlying cause of death. The underlying cause is defined by WHO as “the disease or injury which initiated the train of events leading directly to death, or the circumstances of the accident of violence which produced the fatal injury.” The underlying cause is selected from the conditions entered by the physician in the cause-of-death section of the death certificate. When more than one cause or condition is entered by the physician, the underlying cause is determined by the sequence of conditions on the certificate, provisions of the ICD, and associated selection rules and modifications. Generally, more medical information is reported on death certificates than is directly reflected in the underlying cause of death. This is captured in NCHS multiple cause-of-death statistics.

Tabulation lists and cause-of-death ranking

For this report, the tabulation List of 113 Selected Causes of Death used for deaths of all ages. This list is also used to rank leading causes of death.

Race and Hispanic origin

The 1989 revision of the U.S. Standard Certificate of Death allows the reporting of race and Hispanic origin separately on the death certificates. Race of decedent is reported in nine categories on the death certificates: white, black, American Indian, Chinese, Japanese, Hawaiian, Filipino, “other” Asian or Pacific Islander, and “other” race. Hispanic origin of decedent is reported as the country of origin. The 2003 revision of the U.S. Standard Certificate of Death allows the reporting of more than one race (multiple races). This change was implemented to reflect the increasing diversity of the population of the United States and to be consistent with the decennial census. The race and ethnicity items on the revised certificate are compliant with the 1997 “Revision of the Race and Ethnic Standards for Federal Statistics and Administrative Reporting.” These were issued by the Office of Management and Budget (OMB) and have replaced the previous standards that were issued in 1997.

Age of decedent

Age of decedent is computed in most cases from the decedent's date of birth and date of death as reported on the death certificate.

Population bases for computing rates

Populations used for computing death rates shown in this report represent the population residing in DC, enumerated as of April 1 for census 2000 year and estimated as of July 1 for 2005. Population estimates used to compute death rates for DC for 2005 are shown for 10 year age groups. Death rates shown in this report for 2005 are based on populations that are consistent with the 2000 census levels. Death rates shown in this report for 2005 by ward are based on 2000 census population.

Computing rates

Rates in this report are on an annual basis per 100,000 population residing in the District of Columbia. Crude death rates are presented per 100,000 estimated population for 2005 and per 100,000 enumerated population for census 2000 in a specified group. Population estimates represent the population at risk of dying in a specified group.

Age-specific death rates are per 100,000 population in a specified age group, such as 1-4 years or 5-9 years for 2005.

Age-adjusted rates (R') are used to compare relative mortality risks among groups and overtime. However, they should be viewed as relative indexes rather than as actual measures of mortality risks. They were computed by the direct method, that is, by applying age-specific death rates (RI) to the U.S. standard million population age distribution. All age-adjusted rates shown in this report are based on the year 2000 standard million population.

EXAMPLE
CALCULATION OF AGE-SPECIFIC, CRUDE AND ADJUSTED MORTALITY RATES

CALCULATION OF AGE-SPECIFIC, CRUDE, AND AGE-ADJUSTED MORTALITY RATES

All Deaths Due to Heart Disease: District of Columbia, 2005

Age	pop	deaths	age-specific death rates per 100,000	standard pop based on U.S. population 2000	number of expected deaths in standard pop	Rounding Expected deaths
0-4	32536	1	3.073518564	69135	2.124877059	2
5-14	65403	0	0	145565	0	0
15-24	89690	5	5.574757498	138646	7.729178281	8
25-34	101762	10	9.826850887	135573	13.32255655	13
35-44	87677	44	50.18419882	162613	81.60603123	82
45-54	75310	127	168.6363033	134834	227.3790732	227
55-64	49783	181	363.5779282	87247	317.210835	317
65-74	35919	251	698.7945099	66037	461.4629305	461
75-84	25004	425	1699.728044	44842	762.1920493	762
85+	8975	473	5270.194986	15508	817.3018384	817
Total	572059	1517		1000000	2690.32937	2690

Age-adjusted Rate= Total number of expected deaths / total standard population *100,000

Age-adjusted Rate = 269.0

Notes:

1. 2000 U.S. population
2. For the purpose of this example, numbers in this column were rounded to the nearest whole number.

Random variation

The number of vital events in this report represents complete counts for the District of Columbia and the U.S. Therefore, they are not subject to sampling error, although they are subject to errors in the registration process such as misreporting. Mortality data, even based on complete counts, may be affected by random variation. That is, the number of deaths that actually occurred may be considered as one of a large series of possible results that could have arisen under the same circumstances. When the number of deaths is small (perhaps fewer than 100), random variation tends to be relatively large. Therefore, considerable caution must be observed in interpreting statistics based on small numbers of deaths. The District of Columbia rates are particularly subject to such variations due to small size of the population. Therefore, caution should be exercised when making comparison between The District of Columbia rates and rates from other populations.

Availability of mortality data

Mortality data are available in publications, unpublished tables, and electronic products as described on the Department of Health, Center for Policy, Planning, and Epidemiology website at the following address: <http://doh.dc.gov/doh/cwp/view,a,1374,q,602045.asp> detailed analysis than provided in this report is possible by using the mortality public-use data set issued each data year.

Definition of terms

Crude death rate	Total deaths per 10,000 population for a specified period. The crude death rate represents the average chance of dying during a specified period for persons in the entire population.
Age-specific death rate	Deaths per 100,000 population in a specified age group, such as 1-4 years or 5-9 years for a specified period.
Age-adjusted death rate	The death rate used to make comparisons of relative mortality risks across groups and over time. This rate should be viewed as a construct or an index rather than as a direct or actual measure of mortality risk. Statistically, it is a weighted average of the age-specific death rates, where the weights represent the fixed population proportions by age.

Abbreviations and Acronyms

CLRD	Chronic Lower Respiratory Diseases
ICD	International Classification of Diseases
ICD-10	International Classification of Diseases, Tenth Revision of this classification
NCHS	National Center for Health Statistics
TIA	Transient ischemic attacks

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Endnotes:

ⁱ http://doh.dc.gov/DOH/cwp/view,a,1373,q,582340,dohNav_GID,1801,dohNav,%7C33183%7C33184%7C.asp

ⁱⁱ Kofie, V. Y., et al. District of Columbia Cancer Incidence & Mortality Report (1999), D.C. Division of Cancer Control, Department of Health (Cancer Reports No. DOHDCCR-01-2002/04/01).