Critical Health Indicators

Working for a Healthy Hartford

2010

City of Hartford
Department of Health and Human Services

CONTACT INFORMATION

Revised in 2010 by:

Tung Nguyen, MPH, City of Hartford

Advisory Committee:

Bruce Gould, MD, University of Connecticut Health Center
Rita Kornblum, BS, City of Hartford
Leticia Marulanda, MD, City of Hartford
Raul Pino, MD, MPH, City of Hartford
Carlos Rivera, MPH, MBA, LCSW, FACHE, City of Hartford
Carol Steinke, RN, BSN, City of Hartford

Special thanks to the following individuals for their contributions to this report:

Federico Amadeo, Connecticut Department of Public Health
Jessica Brockmeyer, MPH, Connecticut Department of Public Health
Kenneth Carley, DrPH, Connecticut Department of Public Health
Carmen Chaparro, MS, City of Hartford
Lou Gonsalves, Connecticut Department of Public Health
Evelyn Mantilla, City of Hartford
Beth Mertz, RN, MSN, City of Hartford
Carl Shield, MS, NCC, LPC, Capitol Region Mental Health Center
Jim Siemianowski, Connecticut Dept. of Mental Health & Addiction Services
Maureen Williams, RN, BS, MA, Connecticut Department of Public Health
Members of the Hartford Public Health Advisory Council

Pedro Segarra
Mayor

City of Hartford
Department of Health and Human Services

131 Coventry Street
Hartford, CT 06112

(860) 757-4700

tnguyen@hartford.gov
www.hartford.gov

2010 | CRITICAL HEALTH INDICATORS

TABLE OF CONTENTS

I. Executive Summary 6

II. Demographic Characteristics 7

III. Selected Health Indicators 8

- A. Reportable Diseases
- B. Maternal and Infant Health
- C. Infant Mortality
- D. Cancer
- E. HIV/AIDS
- F. Asthma
- G. Lead Screening and Lead Poisoning
- H. Chronic Disease Risk Factors
- I. Behavioral Health

IV. Leading Causes of Death with Trends for 2000-2008 17

- J. Mortality in Hartford 2008
- K. Mortality Trends in Hartford 2000-2008

V. Health Disparities 27

VI. Addressing the Challenges 28

VII. Appendix 30

I. Executive Summary

Thank you for your interest in Hartford's health. This document represents the Health and Human Services Department's (HHS) continued efforts to present the health status of our residents to all interested parties.

Now, more than ever, it is necessary to understand how disease impacts the productivity, quality of life and general wellness of our residents. HHS recognizes its responsibility in identifying the health and wellness needs of our community and the importance of promoting policies that support and improve Hartford's public health environment. To this end, we have issued this second edition of the Hartford's "Critical Health Indicators." This document is consistent with HHS' goal to better inform and prepare our residents and partners to address the health challenges confronting our city. In this fashion, together, we can determine where our health and wellness resources will have the greatest impact.

For the 2010 edition, in addition to demographic information and the selected health indicators, we have included the leading causes of death for Hartford residents from 2000-2008. The leading causes of death are presented by age group, gender, race and ethnicity. This document also includes an introduction to the Health Equity Index (HEI), which is a tool developed by the Connecticut Association of Directors of Health (CADH). HEI is intended to enhance our understanding of the relationship between social determinants of health and health outcomes.

Through this document, we hope to convey that together we can improve our health, the health of our children and the health of our community.

We encourage any comments and observations regarding Hartford's health and thank you in advance for your support.

Respectfully,

Carlos Rivera, MPH, MBA, LCSW, FACHE
Director of Health and Human Services

II. Demographic Characteristics

Hartford is a medium-sized city with an estimated population of 124,062 living in 43,438 households within 18 square miles. Hispanics or Latinos (41.4%) are the largest racial or ethnic group in Hartford, followed by Blacks (35.8%), and Whites (17.3%). Approximately three percent of the population reports two or more races. In comparison, the state's and county's population consist less than fifteen percent Hispanics (11.6% and 13.5%, respectively), and less than twelve percent Blacks (9% and 11.7%, respectively). About two percent of each the state's and county's population reports two or more races.

According to the 2006-2008 American Community Survey, 32.5% of Hartford individuals and 29% of Hartford families are living below poverty level. There is a significant difference in the percentage of children less than 18 years old living below poverty level in Hartford (45.9%) as compared to Hartford County (15%); the median household income of $29,224 is less than half of the $63,310 Hartford County median income. And these differences are even greater when compared to the state, where the percentage of children less than 18 years old living below poverty level is 11.5% and the median household income is $68,411.

According to Connecticut Department of Labor, Hartford's unemployment rate is 15.5% as of June 2010, which is significantly higher than the state unemployment rate of 8.9%. Of the city resident population aged 25 years old or older, 68% had a high school degree or equivalent; the county and the state rated nearly equally at 86.6% and 88.2%, respectively. And with regards to higher education, 13.7% of Hartford residents aged 25 years or older had attained a bachelor's degree or higher while within Hartford County and Connecticut, the rate is higher at 32.8% and 34.8%, respectively.

COMPARATIVE DEMOGRAPHICS

2008 Estimates	Hartford	Hartford County	Connecticut
Population			
Total Population*	124,062	877,312	3,501,202
Significant New Population**	13,865	39,175	142,105
Male	48.1%	48.4%	48.7%
Female	51.9%	51.6%	51.3%
Total households	43,438	338,968	1,325,680
Single-parent family households	35.1%	17.8%	16.1%
Race, Age and Ethnicity			
American Indian/Alaskan Native	0.5%	0.2%	0.2%
Asian	1.9%	3.4%	3.3%
Black	35.8%	11.7%	9.0%
White	17.3%	69.4%	74.0%
Hispanic, any race	41.4%	13.5%	11.6%
Two or more races	3.3%	2.1%	2.0%
Under 5 Years Old	7.6%	6.1%	6.1%
Under 18 Years Old	27.5%	23.3%	23.5%
19 - 64 Years Old	63.9%	62.5%	63.0%
65 Years and Over	8.9%	14.2%	13.5%
Median Age	30.1	39.5	39.1
Primary Language Spoken at Home			
English	53.0%	76.9%	80.3%
Spanish	38.0%	11.0%	9.4%
Other Indo-European languages	7.0%	9.4%	7.7%
Asian and Pacific Islander languages	0.9%	1.9%	2.0%
Social and Economic Indicators			
High school diploma (or equivalent)	68.0%	86.8%	88.2%
Bachelor's degree or higher	13.7%	32.8%	34.8%
Median Household Income	$29,224	$63,310	$68,411
Families below poverty level	29.0%	7.4%	6.0%
Individuals below poverty level	32.5%	10.1%	8.5%
Children (< 18 years old) below poverty level	45.9%	15.0%	11.5%
Civilian labor force, unemployed (June, 2010)***	15.5%	9.1%	8.9%

Data Source: U.S. Census Bureau, 2006-2008 American Community Survey; *Connecticut Department of Public Health (CT-DPH) 2008 Population Statistics, ***Connecticut Department of Labor (CT-DOL).

**Include both native and foreign born populations whose entry into the U.S. in 2000 or later. The native population reflects the year of entry into the U.S. by people who were born in Puerto Rico, U.S. Island Areas or born outside the U.S. to a U.S. citizen parent and who subsequently moved to the U.S.

III. Selected Health Indicators

A. Reportable Diseases

Reportable diseases are considered of great public health importance and can they be used as a tool to monitor the health status of a targeted population or area, and of significance in identifying trends and outbreaks. As mandated by State laws and regulations, theses diseases are to be reported by healthcare providers and laboratories to the State Department of Public Health (DPH).

There are more than eighty illnesses and conditions on the list of reportable diseases, which is reviewed and updated annually by Connecticut Department of Public Health (CT-DPH). From arboviral diseases (i.e. Eastern Equine Encephalitis, West Nile Virus) to gastrointestinal illnesses (i.e. E. coli and Salmonella) to communicable diseases (i.e. HIV/AIDS, Chlamydia, and gonorrhea), Hartford has experienced the burden and related disparities due to findings of reportable diseases at a significantly higher level than neighboring communities. For example, more sexually transmitted diseases (STDs), such as Chlamydia and gonorrhea, were reported in Hartford than any other city in Connecticut, affecting females three to four times more than males, and affecting Blacks and Hispanics up to four times more than whites. Special attention should be given to co-infections and co-morbidities in urban settings where the poverty rates are higher and access to care is a barrier. Continued screening, outreach, education, and treatment of STDs are necessary to the quality of life of Hartford residents.

REPORTABLE DISEASES

Disease	2006		2007		2008		Hartford 2006-2008 Average		Hartford County 2006-2008 Average		Connecticut State 2006-2008 Average	
	Cases	Rate*	Cases	Rate*	Cases	Rate*	Cases	Rate*	Cases	Rate*	Cases	Rate*
Chlamydia	1671	1374	1888	1553	2077	1708	1879	1545	3833	447	8184	342
Gonorrhea	540	444	462	380	538	443	513	422	891	104	2582	76
Syphilis (primary & secondary)	14	11.5	7	5.8	5	4.1	9	7.3	21	2.4	66	1.9
Hepatitis A (infectious)	0	0.0	1	0.8	0	0.0	0.3	0.3	7	0.8	32	1.0
Hepatitis B (all types)[1]	31	25.5	34	27.9	39	32.1	35	28.5	137	12.7	524	15.3
Hepatitis C[2]	1399	1128	1160	935	1146	924	1235	996	n/a	n/a	n/a	n/a
Hepatitis C[3]	137	112.7	140	115.2	213	175.2	163	134.4	510	59.5	2458	72.2
HIV/AIDS	147	119	191	154	92	74	143	116	287	32.7	952	27.2
Tuberculosis (active)	7	5.8	5	4.1	7	5.8	6	5.2	20	2.3	98	2.9
Tuberculosis (latent)[4]	250	201	176	142	143	115	190	153	n/a	n/a	n/a	n/a
Enteric Diseases[5]	30	24.7	53	43.6	49	40.3	44	36.2	327	37.3	1551	44.3

Data Source: CTDPH Statistics & Research/Disease & Injury Surveillance; City of Hartford Disease Prevention and Health Promotion Statistics.

N/A: not available
* Rates are per 100,000 residents based on 2007 population estimates.
[1] Types include acute, chronic, lab report.
[2] Laboratory-reported case of Hepatitis C with positive anti-HCV (Hepatitis C virus) antibody screening test
[3] A positive Anti-HCV screening test was further verified and confirmed by a more specific test (e.g. RIBA. PCR, and genotype).
[4] Latent tuberculosis (TB) is a term used for people who test positive for tuberculosis (most commonly with a positive tuberculin skin test), but do not have any evidence of active infection.
[5] Enteric diseases are major bacterial infections transmitted through food or water, and for outbreaks of food-borne infections of any cause. These bacteria include Campylobacteriosis, Cyclosporiasis, E.coli O157:H7, Giardiasis, Listeriosis, Salmonellosis, Shigellosis, Vibrio, Yersinia.

B. Maternal and Infant Health

Maternal and infant health rates are used worldwide as global indicators of the health status of a population. This section focuses on birth data and outcomes as well as infant mortality data. Adequate prenatal care, including initiating care in the first trimester and receiving regular care until delivery, can be an indicator of access to health care and usually results in fewer birth complications and healthier babies. In Hartford, the percentage of mothers with late or no prenatal care decreased significantly from 38.1% in 2006 to 22.2% in 2008 but the number remains high when compared to the state, where the percentage of mothers with late or no prenatal care is 13.4%.

Low birth weight and prematurity are risk factors for infant death. Hartford's percentage of preterm birth is generally above the state average; the 2006-2008 Hartford average of 13.6% was higher than the Connecticut average of 10.4%. Also, the low birth weight average during the same years for Hartford was 12.1%, compared to the state average of 8.1%.

Hartford has made advancements in immunization rates for vaccine-preventable diseases. From 1999 to 2007, the immunization rate for children at two years of age improved from 64% to 77%. It is recommended that all children by the age of two years old be vaccinated with 4 doses DTaP (diphtheria, tetanus and pertussis), 4 doses PCV (pneumococcal vaccine), 3 does IPV (Polio), 3 doses Hepatitis B, 1 dose MMR (Measles, Mumps, and Rubella), 1-4 does HiB (haemophilus influenzae type b), and 1 dose Varicella.

The teen birth rate is an estimate of the proportion of women younger than 20 years of age who had a live birth during a given year. Infants born to teen-aged mothers are at increased risk of pre-term birth, low birth weight, fetal distress and lifetime risk of social and economic disadvantages. In 2008, the most recent year for which data is available, the Hartford teen birth rate was 19.3% of all births to Hartford residents.

MATERNAL AND CHILD HEALTH KEY INDICATORS

	Hartford 2006	Hartford 2007	Hartford 2006-2008 Average	Hartford 2008	Connecticut 2006-2008 Average
Number of Births (Mother's Race)					
Total	2,241	2,140	2,154	2,178	41,256
Blacks	867	819	844	843	5,451
Whites	1,282	1,193	1216	1,230	32,257
Hispanic, any race	1,154	1,075	1,085	1,105	8,645
Prematurity (< 37 weeks gestation)	13.3%	14.0%	13.6%	13.6%	10.4%
Late or No Prenatal Care (%)	38.1%	28.3%	22.2%	29.5%	13.4%
Low Birth Weight (% of total births) (1)	13.1	11.5	11.6	12.1	8.1
Age Appropriate Immunizations, Children 0-2 years old	77%	77%	n/a	77%(2)	82% (3)
Infant Mortality per 1,000 Live Births					
Total	9.4	13.1	7.0	9.8	6.2
Blacks	13.8	19.5	7.1	13.5	13.2
Whites	2.3	7.5	6.6	5.5	4.8
Hispanic, any race	5.2	6.5	9.2	7.0	6.8
Teen Births					
Percent of Total Births to Women 15-17 Years Old					
Total	6.8	6.0	6.8	6.5	2.2
Blacks	5.1	5.3	4.1	4.8	4.2
Whites	--	--	--	--	0.8
Hispanic, any race	9.3	7.8	10.1	9.1	5.6
Percent of Total Births to Women Under 20 Years Old					
Total	18.2	15.8	19.3	17.8	7.0
Blacks	14.0	14.6	14.7	14.4	8.9
Whites	7.7	8.1	4.9	6.9	3.2
Hispanic, any race	23.6	18.9	26.1	22.9	15.4

Data Source: CT-DPH Vital Statistics; City of Hartford Bureau of Vital Records: CT-DPH CIRTS

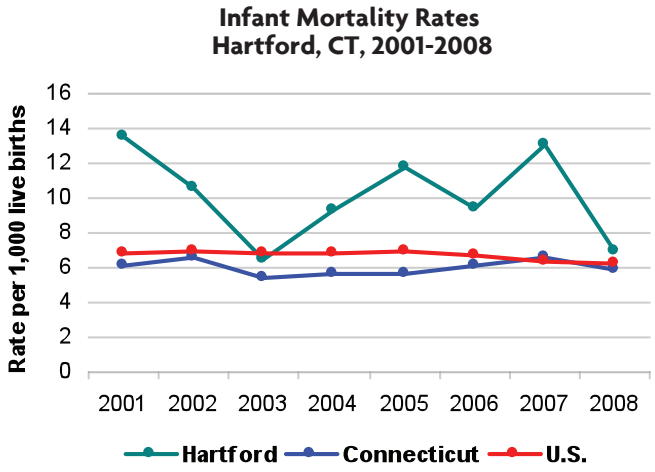
(1) Low birth weight birth is considered a birth weight of less than 2,500 grams (5 pounds, 8 ounces).

(2) & (3) Three-year average (2006-2008) was calculated using 2005-2007 data, since 2008 data were not available.

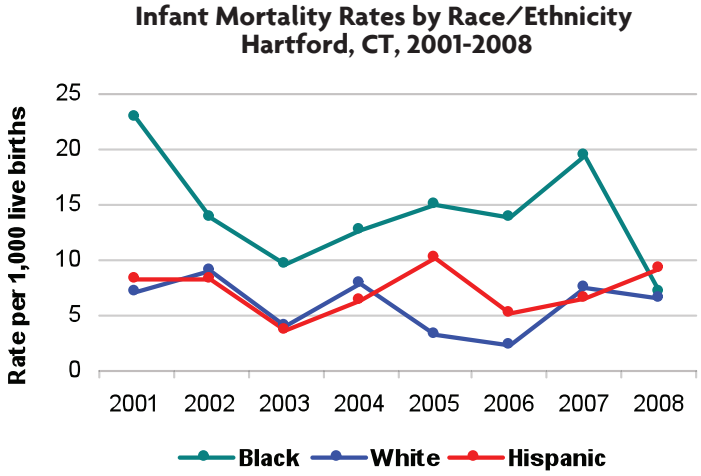
C. Infant Mortality

The infant mortality rate measures the number of deaths for children less than 1 year old per 1,000 live births. Disparities in infant mortality by race/ethnicity are an important measure of the inequalities in a society. Studies suggest that the persistent race disparity in infant mortality is driven by poverty, racism and chronic diseases. And while prenatal care is important to a healthy birth, increasing access to health care and focusing on preconception health may help reduce this racial/ethnic gap.

Although Hartford's infant deaths have declined in recent years, they remained significantly higher when compared to the state. Black infants have consistently shown higher rates of mortality than Hispanic and white infants; the 2006-2008 Hartford average infant mortality rates for Hispanics and whites were 7.0 and 5.5 per 1,000 live births, respectively, the average rate during the same period for Blacks was 13.5 per 1,000. These differences may relate in part to differences in risk factors for infant mortality such as preterm and low birthweight delivery, socioeconomic status, access to medical care, etc. However, many of the racial and ethnic differences in infant mortality remain unexplained.

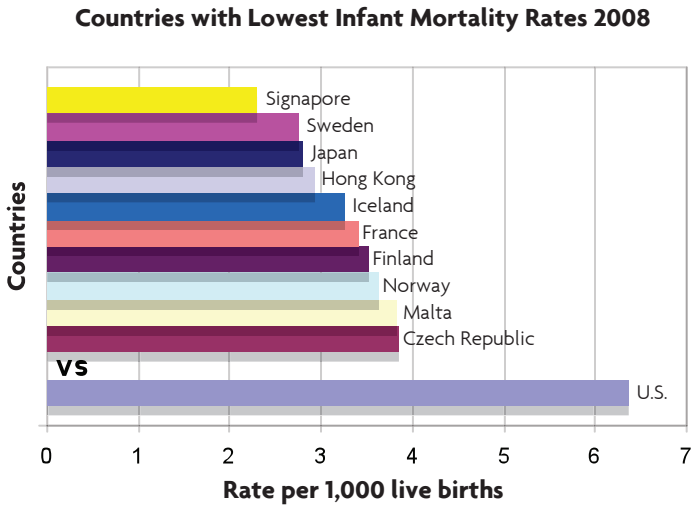


Data Source: City of Hartford Bureau of Vital Records; CT-DPH Vital Statistics; CDC Data & Statistics



Data Source: City of Hartford Bureau of Vital Records; CT-DPH Vital Statistics

The infant mortality rate has continued to decline steadily over the past few years in the United States. However, when compared to other developed countries, the U.S. infant mortality rate is still much higher despite the fact that we spend more on health care than any other country.

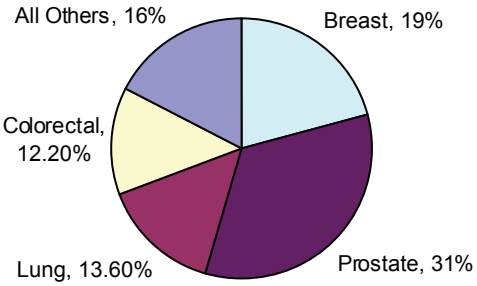


Data Source: The World Health Organization, 2008

D. Cancer

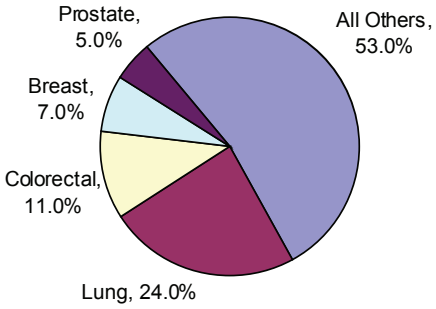
Cancer continues to be one of the leading causes of death in Hartford. Prostate, breast, lung, and colorectal cancers account for about eight of ten new cases of cancer. Many of these cancers can be prevented if people changed their habits by quitting smoking, maintaining a healthy weight through diet and exercise, making healthier food choices, avoiding the sun, and having regular screenings. Approximately 200 Hartford residents die of cancer each year. More than half of all cancer deaths in Hartford are due to cancers of the lung, colon or rectum, breast, and prostate.

Most Frequently Diagnosed Cancers
Hartford, CT, 2006-2008



Data source: Connecticut Tumor Registry

Most Common Types of Cancer Deaths
Hartford, CT, 2006-2008

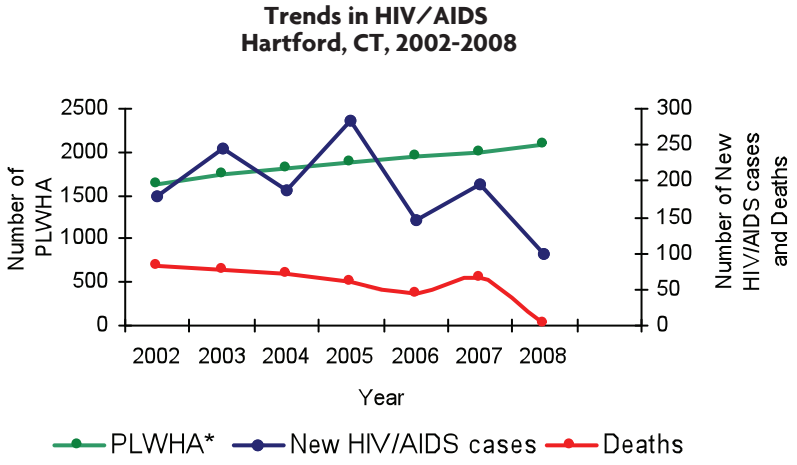


Data source: Connecticut Tumor Registry

E. HIV/AIDS

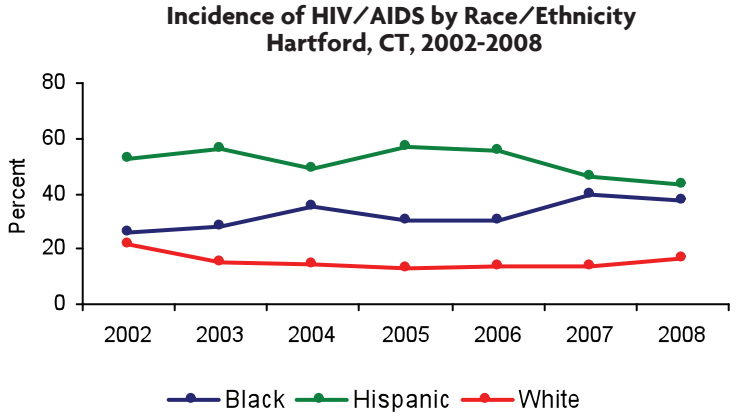
Although new cases of HIV/AIDS in Hartford have continued to decline over the past few years, new data indicate that the number of people who have been diagnosed at latter stages of the disease is increasing. Coincidentally, the mortality rate has also decreased, causing an increase in the population who continue to live with HIV/AIDS (PLWHA) due to new and advanced treatments. In Hartford, Blacks and Hispanics are disproportionately affected by both incidence (number of new cases) and prevalence (number of people living with the disease) of HIV/AIDS when compared to whites. This disparity is driven by many complex social and structural factors.

Injection drug use (IDU) accounts for approximately fifty percent (46.9%) of the newly diagnosed HIV/AIDS cases in Hartford. Other risks has been mostly associated with sexual activity, either men having sex with men (11.6%) or through heterosexual contact (22.4%) But recent surveillance data showed that men having sex with men (MSM) continues to be a major risk factor that is on the rise for new transmission of HIV/AIDS. In 2009, 25% of HIV/AIDS transmission was MSM, a significant increase from 8% in 2002. Despite the visibility of HIV/AIDS in Hartford, the availability of HIV testing, including free, confidential, and anonymous testing in the city, and the well-known benefits and availability of treatment for HIV infection, nearly twenty percent of persons diagnosed with AIDS in Hartford between 2002 and 2008 were diagnosed with HIV infection only 12 months or less before their AIDS diagnosis.

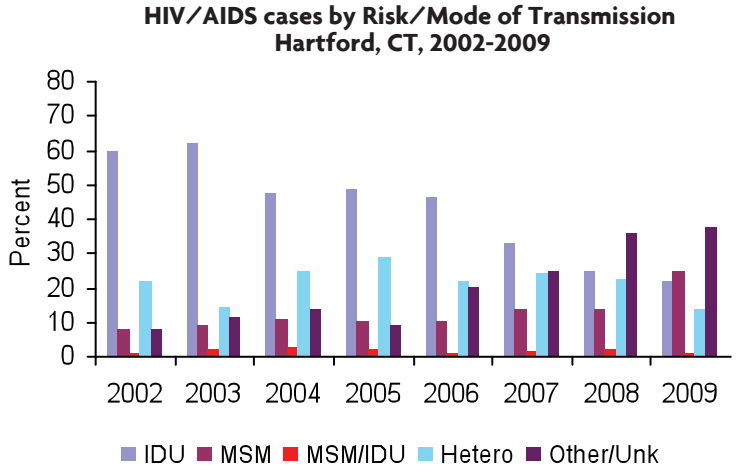


Data Source: CT-DPH Connecticut HIV/AIDS Statistics

* PLWHA = People Living With HIV/AIDS



Data Source: CT-DPH Connecticut HIV/AIDS Statistics

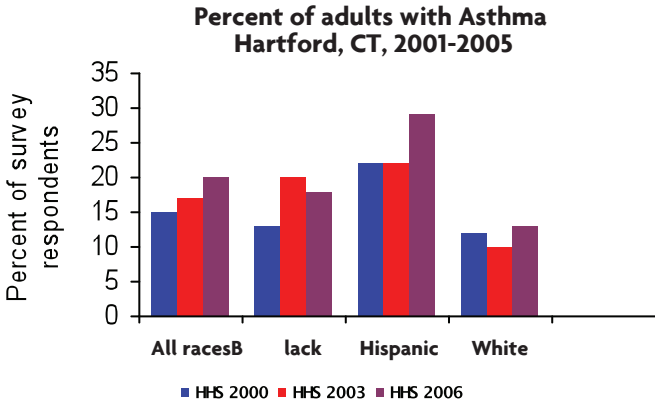


Data Source: CT-DPH Connecticut HIV/AIDS Statistics

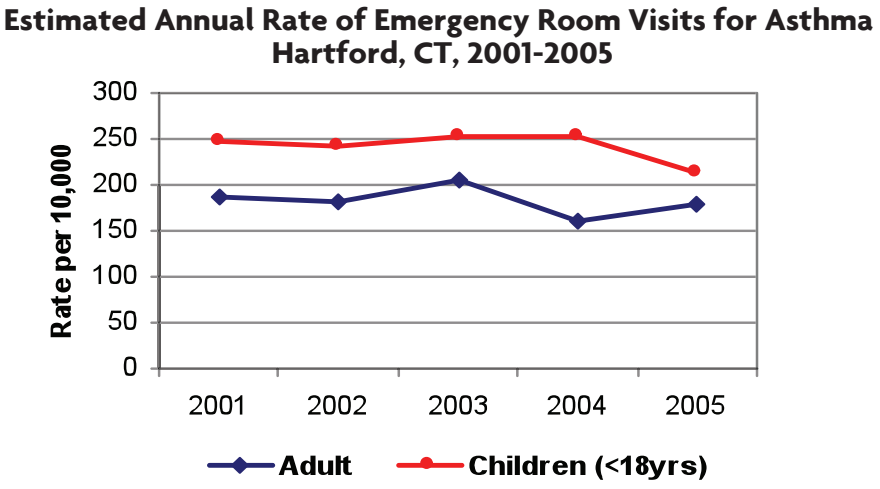
F. Asthma

Asthma affects approximately 20% of Hartford adults according to the 2006 Hartford Health Survey (HHS), which is a self-reported health survey of city residents who are 18 years and older. Hispanic and Black respondents reported higher rates of asthma than white respondents. Asthma is a leading cause of school absenteeism and one of the leading causes of hospitalization and emergency room (ER) visits for children and youth in the United States. The asthma ER visit rates among children were 1.5 times higher than for adults in Hartford. Approximately 11.5% of public school students reported having asthma. During the 2004-2006 school years, asthma rates were highest among pre-K and kindergarten (17.2%), and 6th and 7th grade (12.5%) students; the rate drops to 5.3% for 10th and 11th grade students.

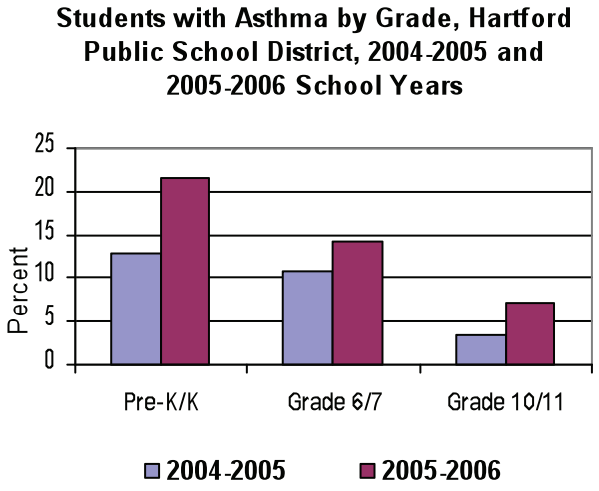
While the exact causes of asthma are unknown, asthma attacks or episodes can be triggered by exposure to house dust mites, mold, pollen, tobacco smoke and indoor/outdoor air pollutants; and other strenuous respiratory conditions such as infections and exercise, and can be controlled with effective treatment and management.



Data Source: Hartford Health Survey 2000, 2003, and 2006.



Data Source: CT-DPH Asthma Surveillance Program

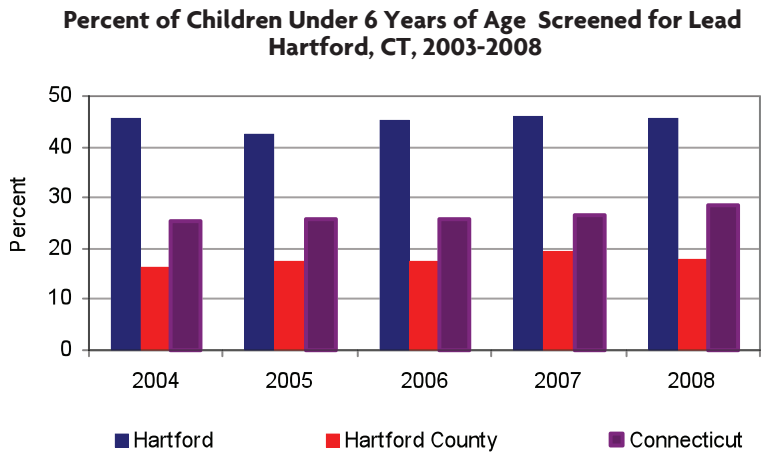


Data Source: CT-DPH Asthma Surveillance Program

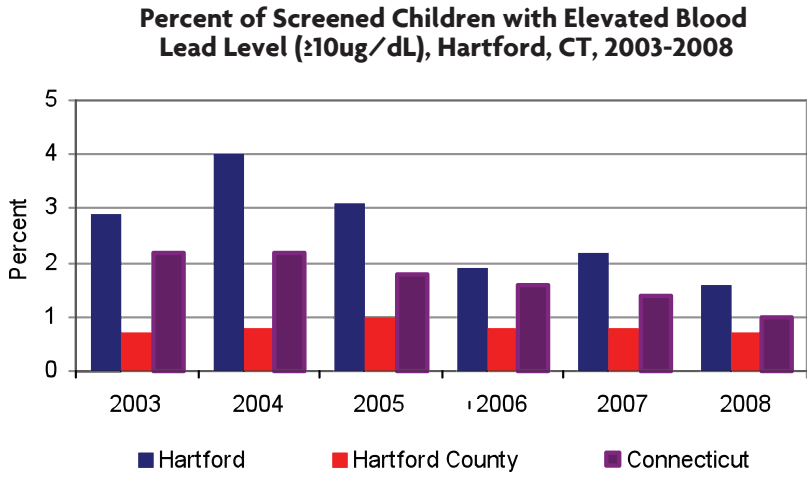
G. Lead Screening and Lead Poisoning

Since January of 2009, Connecticut mandates that every child shall have a blood lead screening performed at 12 months and again at 24 months. Any child between 2 and 5 years old, who has not previously been screened, shall also have a blood lead screen performed immediately, regardless of risk of exposure to lead. In 2008, approximately 46% or 5,540 Hartford children from birth to 6 years of age were tested for lead poisoning. Of these children, 77% were 1 or 2 years old when screened.

Although childhood lead poisoning remains a serious problem, the number of new cases identified in 2008 marks the lowest ever, even as health providers expanded testing for one- and two-year-old children. Among children who had a blood lead screening in 2008 and had not had a result of ≥10 ug/dL blood lead levels before 2008, 1.6% or 84 children had confirmed elevated blood lead levels of ≥10 ug/dL for the first time in 2008.



Data Source: CT-DPH Lead Poisoning and Control Program, Screening and Surveillance



Data Source: CT-DPH Lead Poisoning and Control Program, Screening and Surveillance

H. Chronic Disease Risk Factors

The Centers for Disease Control and Prevention (CDC) state that "poor health is not an inevitable consequence of aging." Promotion and adoption of preventive measures can help reduce the potential for costly health problems, preserve health, and improve quality of life.

CHRONIC DISEASE DEATH RATES*

	Hartford	Hartford County	Connecticut
All Causes	740.8	878.1	842.2
Heart Disease	190.4	239.2	228.5
Stroke	43.8	47.2	47.8
All Cancer	138.3	212.8	202.0
HIV/AIDS	34.8	3.7	4.8
Diabetes	22.1	20.0	21.0

Data Source: CT-DPH Mortality Tables, 2002-2006.
*Rates are per 100,000 residents based on 2007 population estimates

RISK FACTORS

	Hartford [1]	Hartford County [2]	Connecticut [2]
Smoking a	23.4%	15.3%	15.4%
Obesity b	31.9%	20.9%	21.7%
Overweight c	25.8%	36.5%	37.5%
No physical activity d	33.0%	19.3%	19.7%

Data Source:
(1) Hartford Health Survey 2006 is a self-reported telephone survey that collected feedbacks from residents aged 18 years or older on the broader determinants of health, including access to and satisfaction with health care, neighborhood issues, social conditions, and health risk behaviors, in addition to collecting more traditional health information on chronic disease and health screenings.
(2) Behavioral Risk Factor Surveillance Survey (BRFSS) 2007

a) Percentage of adults who have smoked in their lifetime and currently smoke.
b) Percentage of adults who reported Body Mass Index (BMI) greater than or equal to 30.0
c) Percentage of adults who reported Body Mass Index (BMI) greater than 25.0 but less than 30.0
d) Percentage of adults who reported doing no leisure time exercise or physical activity.

I. Behavioral Health

Depression is the most common disorder of all mental illnesses. According to Healthy People 2010, depression is the leading cause of disability and of more than two-thirds of suicides each year. Depression has been associated with alcohol and illicit drug use; these are known causes of some of this country's most serious problems, including motor vehicle accidents, violence, injury, school failure, and HIV infection.

In 2008, Connecticut Department of Mental Health and Addiction Services (DMHAS) provided mental health and substance abuse services to 8,674 clients living in Hartford. Of that number, approximately 12% of them suffer from depression, more than 40% of them were diagnosed with substance abuse that includes alcohol and/or illicit drugs, and almost 7% were diagnosed with post-traumatic stress disorder.

DIAGNOSIS TYPE OF CLIENTS WHO RECEIVED MENTAL HEALTH AND/OR SUBSTANCE ABUSE SERVICES, 2008

	Hartford	Bridgeport	New Haven
Depression	11.5%	7.9%	11.8%
Substance Use/Abuse a	47.8%	49.7%	50.1%
Post Traumatic Stress Disorder (PTSD) b	6.5%	3.1%	5.8%

Data Source: Connecticut Department of Mental Health and Addiction Services (CT-DMHAS)
a) Include alcohol and illicit drug use.
b) Post-traumatic stress disorder is a common anxiety disorder that develops after exposure to a terrifying event or ordeal in which grave physical harm occurred or was threatened.

IV. Leading Causes of Death with Trends for 2000-2008

Leading causes of death are the most common causes of death and are ranked based on their frequency of occurrence. The most frequent cause of death is ranked as number one, the second most frequent as number two, and so on. By studying causes of death, the overall health status of a community can be established; this information shows which causes have the greatest impact on life spans and can be used to make decisions regarding where funding can be targeted. This section provides the number of deaths for the leading causes of death for 2008 and the nine-year period, 2000 through 2008. The variables included in the analysis were age at death, gender, race/ethnicity, and underlying cause of death.

A. Mortality in Hartford 2008

Summary of Key Findings

For the year, there were 823 deaths: 437 males and 386 females.

- The top ten leading causes of death for 2008, in order of ranking, are coronary heart disease, cancer, accidents (unintentional), lung cancer, stroke, chronic lower respiratory disease (CLRD), homicide, pneumonia and influenza, diabetes, and drug-induced.
- Twenty-two percent (22%) of the total deaths were caused by coronary heart disease (179 deaths), which is the leading cause of death in the city.
- Twenty-one percent (21%) of the total deaths were caused by cancer (170 deaths). Among those who died of cancer, lung cancer was most common (44 deaths), followed by colorectal cancer (15 deaths) and prostate cancer (10 deaths).
- Homicide was the leading cause of death for persons aged 15 to 24 years.
- Diabetes, which is the ninth-leading cause of death in the city, remains an important cause of death for Hispanic and Black females.
- Death rates were higher for men than women for the ten leading causes of death except for diabetes and breast cancer.
- For 7 of the 10 leading causes of death, death rates were highest among Blacks.
- 56% of all deaths were among persons less than 75 years of age. Each death before the age of 75 years resulted in potential years of life lost before reaching milestone, which, when added together across all deaths, totaled more than 10,098 years of potential life lost before age 75.

Figure 1 – Ten leading causes of death, Hartford, CT, 2008

Rank	Cause of Death	No. of deaths	Percent of total deaths
1	Heart Disease	179	21.8
2	All cancer	170	20.7
3	Accidents (unintentional)*	48	5.8
4	Lung cancer	44	5.3
5	Stroke	39	4.7
6	Chronic lower respiratory disease (CLRD)**	33	4.0
7	Homicide	24	2.9
8	Pneumonia and influenza	24	2.9
9	Diabetes	22	2.7
10	Drug-induced deaths	19	2.3

Data Source: Connecticut Department of Public Health, Vital Records, 2008

* Unintentional accidents include motor vehicle accidents, falls, and drowning.
** Chronic lower respiratory diseases (CLRD) include emphysema and asthma.

Note: To make the figures easier to understand and interpret, color codes have been used throughout this section. The same color is used for all cancers regardless of the type. The same is true for unintentional accidents; all unintentional injuries, such as motor vehicle crash, fall, or other unintentional injury, have the same color code.

- There were almost five times more deaths from heart disease than there were from stroke, which is the fifth-leading cause of death.
- Overall, cardiovascular disease (179 deaths) and cancer (170 deaths) caused over forty percent (42.5%) of all deaths.
- Unintentional accident (e.g. falls and motor vehicle crashes, etc.) and homicide caused only 9% of all deaths but 25% of all years of life lost, highlighting the dramatic impact of these conditions on premature death.
- Diabetes and drug overdoses became important causes of death in Hartford.

Figure 2 – Ten leading causes of death by gender, Hartford, CT, 2008

Male
437 total deaths

Rank	Cause of death	No. of deaths
1	All cancer	92
2	Heart disease	86
3	Accidents (unintentional)	33
4	Lung cancer	27
5	Homicide	23
6	Stroke	19
7	Pneumonia and influenza	18
8	CLRD	16
9	Drug-induced	11
10	Septicemia	10

Female
386 total deaths

Rank	Cause of death	No. of deaths
1	Heart disease	93
2	All cancer	78
3	Stroke	20
4	Diabetes	18
5	Lung cancer	17
6	CLRD	17
7	Accidents (unintentional)	15
8	Drug-induced	8
9	Septicemia	8
10	Breast cancer	8

Data Source: Connecticut Department of Public Health, Vital Records, 2008

- The number of cancer and heart disease deaths for men and women was nearly equal (41% for men versus 44% for women) accounting for more than forty percent of total deaths.
- Men are twice more likely to die of unintentional accidents – such as motor vehicles, falls, drowning – and homicide than women.
- Diabetes continued to be an important cause of death among women.

Figure 3 – Ten leading causes of death by race/ethnicity, Hartford, CT, 2008

Black
346 total deaths

Rank	Cause of death	No. of deaths
1	Heart disease	72
2	All cancer	61
3	Stroke	17
4	Homicide	17
5	Accidents (unintentional)	15
6	Lung cancer	14
7	Diabetes	9
8	HIV	9
9	Septicemia	9
10	CLRD	8

Hispanic
219 total deaths

Rank	Cause of death	No. of deaths
1	All cancer	41
2	Heart disease	37
3	Accidents (unintentional)	20
4	Drug-induced	12
5	Stroke	10
6	CLRD	9
7	Lung cancer	8
8	Pneumonia & Influenza	8
9	HIV	7
10	Homicide	7

Data Source: Connecticut Department of Public Health, Vital Records, 2008

White
267 total deaths

Rank	Cause of death	No. of deaths
1	Heart Disease	65
2	All cancer	59
3	Lung cancer	19
4	CLRD	15
5	Accidents (unintentional)	12
6	Stroke	11
7	Pneumonia & Influenza	10
8	Diabetes	7
9	Breast cancer	6
10	Septicemia	5

- Lung cancer ranked higher as a cause of death for Whites than Blacks and Hispanics.
- Deaths from injuries, including homicides and unintentional accidents, among Blacks and Hispanics were more than double those of Whites.
- HIV continued to be an important cause of death among Blacks and Hispanics.

Figure 4 – Leading causes of death by age group, Hartford, CT, 2008

Age group No. of deaths	#1 cause No. of deaths	#2 cause No. of deaths	#3 cause No. of deaths	#4 cause No. of deaths	#5 cause No. of deaths
< 5 years old 19	Certain conditions originating in the perinatal period 9	Congenital malformations 4	Accidents (unintentional) 2	N/A	N/A
5-14 years old 2	Motor vehicle crash 1	All cancer 1	N/A	N/A	N/A
15-24 years old 24	Homicide 15	Motor vehicle crash 5	Suicide2	N/A	N/A
25-44 years old 55	Motor vehicle crash 7	Drug-induced 7	Homicide 6	Pneumonia/ Influenza 4	All cancer 4
45-64 years old 228	All cancer 56	Heart disease 51	Accidents (unintentional) 17	HIV 12	Drug-induced 12
65-74 years old 135	All cancer 45	Heart disease 25	Lung cancer 16	CLRD 10	Stroke 8
75+ years old 360	Heart disease 99	All cancer 64	Stroke 22	Lung cancer 17	CLRD 16
Total deaths 823	Heart disease 179	All cancer 170	Accidents (unintentional) 48	Lung cancer 44	Stroke 39

Data Source: Connecticut Department of Public Health, Vital Records, 2000-2008

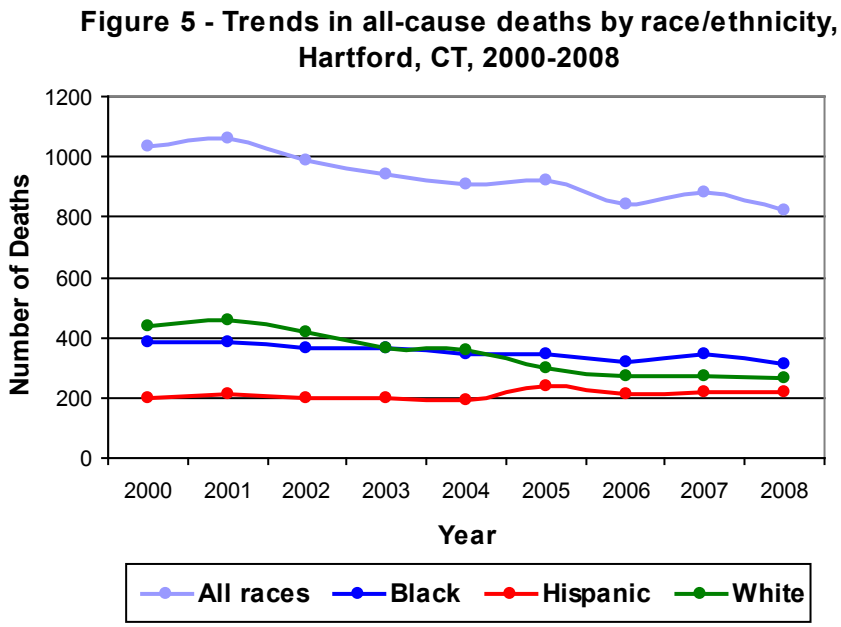
Note: The numbers become small thus we may not be able to consider the five most common causes of death for certain age group. N/A = insufficient data.

- Among persons aged 15 to 24, homicide was the leading cause of death. Unintentional injuries, including motor vehicle accidents and falls, were the second-leading cause of death.
- 55% of heart disease deaths, 56% of stroke deaths, and 48% of chronic lower respiratory disease (CLRD) deaths occurred in persons 75 years of age or older.

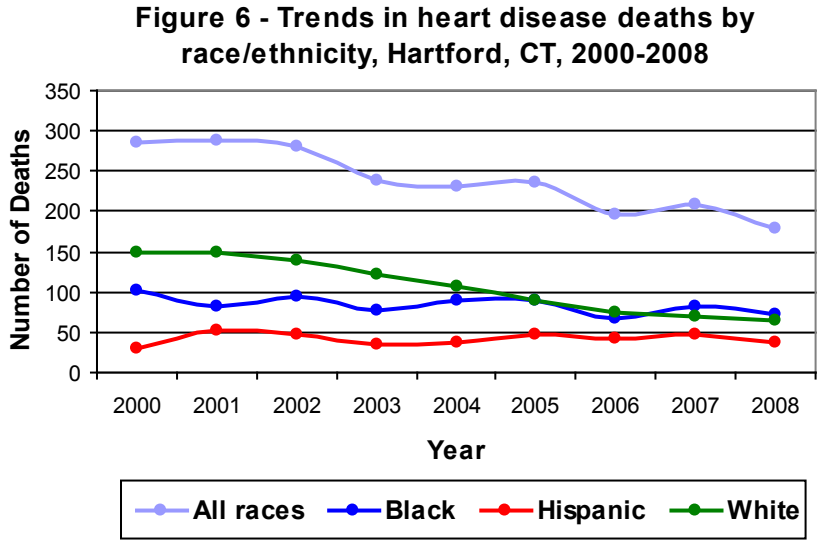
B. Mortality Trends in Hartford, 2000-2008

Summary of Key Findings

In term of population, the number of Whites has declined since 1990 and is predicted to continue declining in Hartford. Latinos will continue to increase. During the period 2000-2008, there were 8,401 deaths among Hartford residents, an average of 944 deaths per year. The ten leading causes of death accounted for 72% of this total. Heart disease, cancer, and stroke, the three leading causes of death, accounted for 50% of all deaths. Unintentional accidents and lung cancer ranked fourth and fifth, respectively, followed by HIV, chronic lower respiratory disease, diabetes, and drug-induced deaths. Homicide ranked tenth accounting for more than 2% of all deaths. Trends in the leading causes of death by race/ethnicity in Hartford from 2000 to 2008 are presented in the following charts:

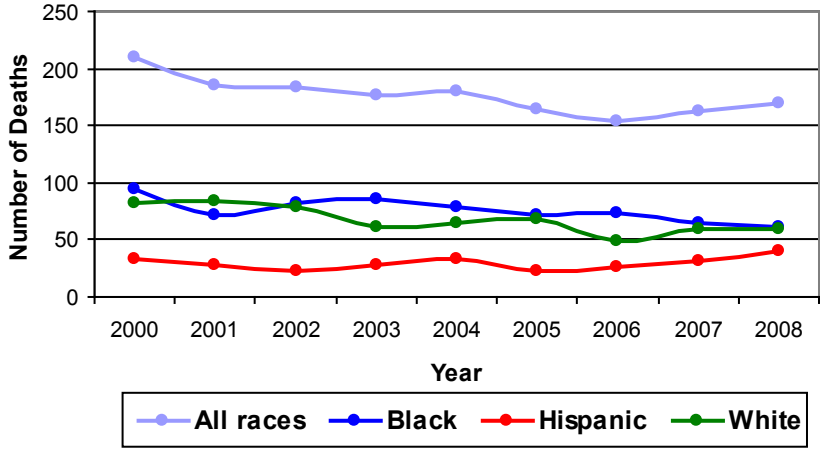


- Overall deaths decreased 21% from 1033 in 2000 to 823 deaths in 2008.
- There were notable decreases in many of the ten leading causes of death from 2000 through 2008. Death rates decreased for cancer (-19%), coronary heart disease (-43%), stroke (-34%), unintentional accidents (-18%), HIV (-74%), and chronic lower respiratory disease (-2%).
- While mortality overall has declined in the past 10 years, Hispanics continued to experience an overall increasing trend in all-cause mortality with notable upward trends observed in cancer including lung caner, chronic lower respiratory disease, diabetes, and homicide.



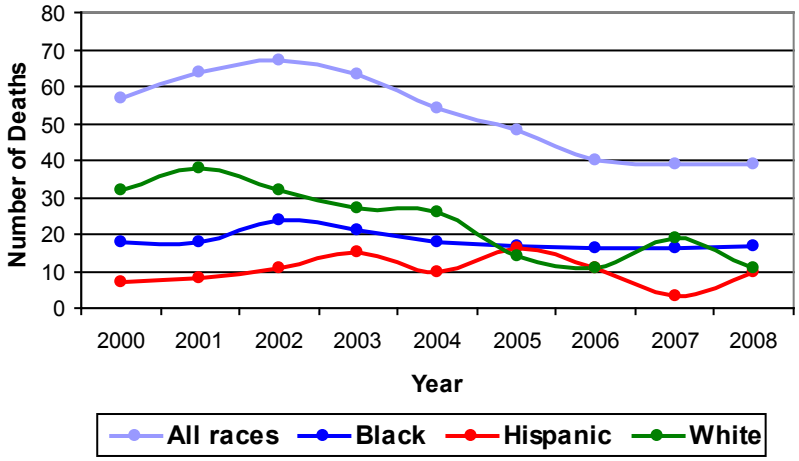
- Although there were 107 fewer deaths from heart disease in 2008 than in 2000, heart disease remained the leading cause of death every year for the past 10 years.
- The number of deaths from heart disease decreased more than 50% for Whites, while Blacks and Hispanics experienced a lesser decline in deaths due to heart disease.

Figure 7 - Trends in cancer deaths by race/ethnicity, Hartford, CT, 2000-2008



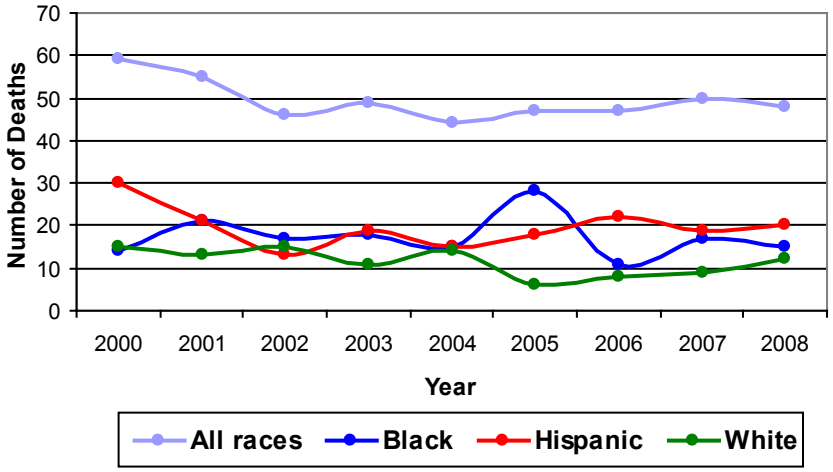
- The number of deaths from cancer has decreased 19% from 210 deaths in 2000 to 170 deaths in 2008.
- Over this period, the average number of deaths from cancer was highest for Blacks compared to other racial/ethnic groups.

Figure 8 - Trends in stroke deaths by race/ethnicity, Hartford, CT, 2000-2008



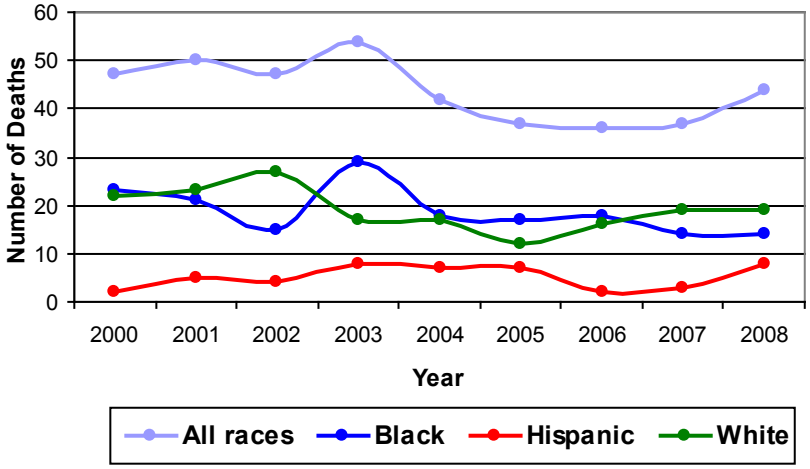
- The number of deaths from stroke has decreased 34% from 57 deaths in 2000 to 39 deaths in 2008.
- The decrease was similar for all racial/ethnic groups but the overall number of deaths has been consistently higher for Blacks in the last five years.

Figure 9 - Trends in unintentional accident deaths by race/ethnicity, Hartford, CT, 2000-2008



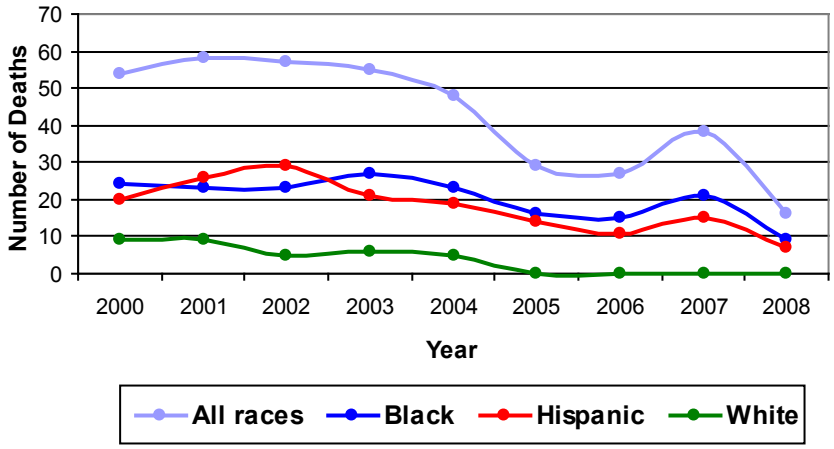
- Unintentional accidents including motor vehicle crashes was the second leading cause of death for persons aged 5 to 44 years old.
- Despite a slight decrease from 2000 through 2008, the overall number of deaths was highest for Hispanics compared to other racial/ethnic groups.

Figure 10 - Trends in lung cancer deaths by race/ethnicity, Hartford, CT, 2000-2008



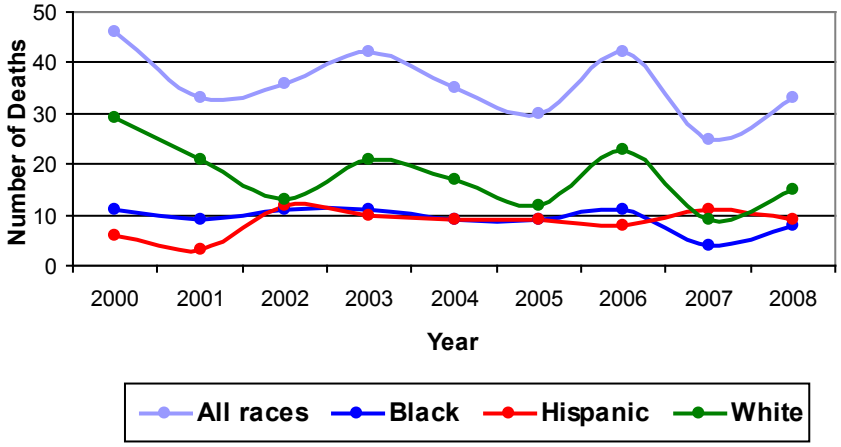
- Lung cancer deaths have increased 0.2% from 47 in 2000 to 44 in 2008.
- While the overall number of deaths from lung cancer has decreased slightly for Blacks and Whites, there was a notable upward trend in lung cancer deaths for Hispanics from 2000 through 2008.

Figure 11 - Trends in HIV deaths by race/ethnicity, Hartford, CT, 2000-2008



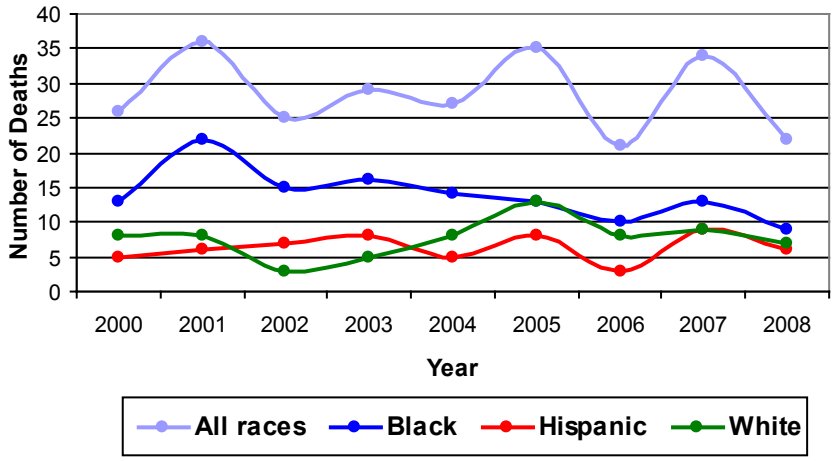
- HIV, which has been consistently ranked as one of the ten leading causes of death since 2000, was not among the 10 leading causes of death in 2008.
- Although HIV deaths have declined for all racial/ethnic groups, both Blacks and Hispanics experienced about 80% higher HIV mortality than Whites.

Figure 12 - Trends in chronic lower respiratory disease deaths by race/ethnicity, Hartford, CT, 2000-2008



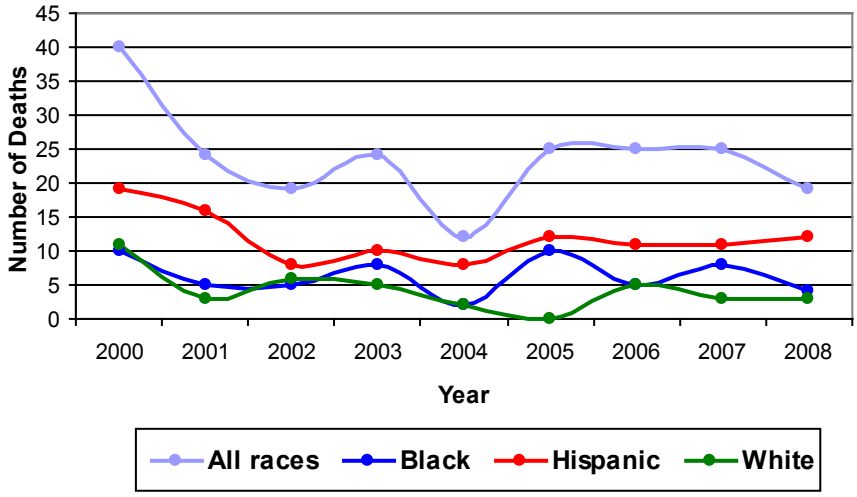
- Since 2000, chronic lower respiratory disease (CLRD) including asthma and emphysema has consistently ranked as one of the ten leading causes of death.
- Despite an overall decreasing trend in deaths from CLRD, Hispanics continued to experience a notable upward trend during the period 2000-2008.

Figure 13 - Trends in diabetes deaths by race/ethnicity, Hartford, CT, 2000-2008

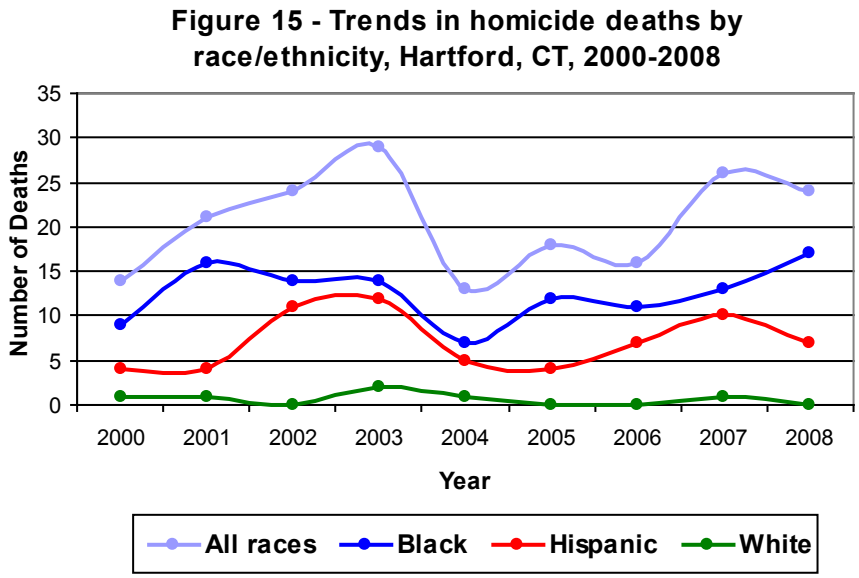


- Diabetes remains one of the top ten leading causes of death between 2000 through 2008 with notable increasing trends in White and Hispanic populations.
- Despite the overall declining trend over this period, Blacks had the highest number of deaths compared to Hispanics and Whites.

Figure 14 - Trends in drug-induced deaths by race/ethnicity, Hartford, CT, 2000-2008



- Drug-induced mortality has not been consistently ranked as a leading cause of death but has been a leading cause of premature deaths during the period 2000-2008.
- In 2008, it was the second leading cause of premature death among persons aged 25 to 44 years, and the fourth-leading cause of death for Hispanics.



- Homicide has been the third-leading cause of premature deaths from 2000 through 2008.
- Over this period, homicide among Blacks was significantly higher than any other racial/ethnic groups, about two and a half times that of Hispanics and more than fifteen times that of Whites.

Figure 16 – Comparison of the leading causes of death by year, Hartford, CT (2000-2008)

Year	#1 cause No. of deaths	#2 cause No. of deaths	#3 cause No. of deaths	#4 cause No. of deaths	#5 cause No. of deaths	#6 cause No. of deaths	#7 cause No. of deaths	#8 cause No. of deaths	#9 cause No. of deaths	#10 cause No. of deaths
2000	Heart disease 286	All cancer 210	Accidents (unintentional) 59	Stroke 57	HIV 54	Lung cancer 47	CLRD 46	Drug induced 40	Diabetes 26	Septicemia 21
2001	Heart disease 287	All cancer 185	Stroke 64	HIV 58	Accidents (unintentional) 55	Lung cancer 50	Diabetes 36	Septicemia 35	CLRD 33	Drug induced 24
2002	Heart disease 281	All cancer 184	Stroke 67	HIV 57	Lung cancer 47	Accidents (unintentional) 46	CLRD 36	Diabetes 25	Pneumonia & influenza 23	Colorectal cancer 23
2003	Heart disease 238	All cancer 177	Stroke 63	HIV 55	Lung cancer 54	Accidents (unintentional) 49	CLRD 42	Septicemia 30	Diabetes 29	Homicide 29
2004	Heart disease 232	All cancer 180	Stroke 54	HIV 48	Accidents (unintentional) 44	Lung cancer 42	CLRD 35	Septicemia 29	Diabetes 27	Colorectal cancer 23
2005	Heart disease 235	All cancer 165	Stroke 48	Accidents (unintentional) 47	Lung cancer 37	Diabetes 35	CLRD 30	HIV 29	Pneumonia & influenza 27	Drug induced 25
2006	Heart disease 197	All cancer 153	Accidents (unintentional) 47	CLRD 42	Stroke 40	Lung cancer 36	HIV 27	Drug induced 25	Septicemia 24	Diabetes 21
2007	Heart disease 208	All cancer 162	Accidents (unintentional) 50	Stroke 40	HIV 38	Lung cancer 37	Diabetes 34	Homicide 26	CLRD 25	Drug induced 25
2008	Heart disease 179	All cancer 170	Accidents (unintentional) 48	Lung cancer 44	Stroke 39	CLRD 33	Homicide 24	Pneumonia & influenza 24	Diabetes 22	Drug induced 19

V. Health Disparities

As public health endeavors to improve community health, it is understood that health is not just the product of individual characteristics – such as genetics, behaviors, and lifestyle choices – but also of underlying, or root causes, that can define a lifelong health trajectory. These root causes, generally referred to as social determinants of health (SDOH), are powerful independent predictors of health outcomes. The Connecticut Association of Directors of Health (CADH), a non-profit membership organization that represents local directors of public health departments and districts in the state, has developed a Health Equity Index (HEI) that can be used to identify social, economic, and environmental conditions and their correlations or relationships to specific health outcomes. Key social determinants of the HEI include, but are not limited to; economic security, employment, education, environmental quality, housing, civic involvement, community safety, and transportation. These social determinants, collectively, form the fabric of social and economic opportunity and a healthy environment.

The HEI is based on a ten point measurement scale, where 1 is a low score and 10 is a high score. Findings from the index showed that poor health is concentrated in certain Hartford neighborhoods. Life expectancy, the average age to which a newborn is expected to live, is a fundamental measure of a community's health. In Hartford, life expectancy decreases in neighborhoods with lower household income. Although gaps among income groups have narrowed, life expectancy scores shown by the index in the more affluent neighborhoods were three to four folds higher than poorer neighborhoods. Premature death can be defined as death before 75 years. One way of measuring "premature" death is to calculate the difference between 75 years and the age that a person dies; this is known as "Years of Potential Life Lost (YPLL)." The index score showed that premature death impacts residents in lower-income neighborhoods more than higher-income neighborhoods. Residents of Hartford's poorest neighborhoods consistently have higher mortality rates from almost all diseases, compared with residents of its more affluent neighborhoods.

Health and health disparities can also be influenced by other social and economic environments, such as education, employment and healthcare access. According to the index, Hartford residents with less than a 9th grade education and/or a bachelor's degree are more likely to live in poverty and make unhealthy choices. For instance, poor and less educated neighborhoods received a lower index score for teen births and births not receiving prenatal care in the first trimester. In addition, the index demonstrated a strong association between limited education and increased all-cause mortality. This may involve the phenomenon that low education attainment can often lead to poorer working conditions and jobs that involve more intense manual labor. The rates of unemployment can also affect a person's health psychologically, mentally, and physically. The index reported that unemployment is significantly correlated with poor health outcomes in the areas of heart disease, diabetes, healthcare access, infectious diseases, and life expectancies.

This section only provided some key findings from the index in regard to the relationships between SDOH and health outcomes. We recognize that health disparities exist in other forms of social, economic, and environmental conditions and plan to include a more in-depth discussion in a Health Equity Alliance (HEA) final report. To learn more about the HEI, one can visit the HEA web site at http://index.healthequityalliance.us/

VI. Addressing the Challenges

Health goes beyond the absence of disease or illness; true health is determined by many factors. This health indicators profile is a key step in a long-term process of improved health and well-being for all Hartford residents. Changing individual behaviors and reducing the impact of risk behaviors on health and wellness are difficult tasks since behaviors are complex and are influenced by the environment, individual choice, and motivation.

Where we live, learn, work and play can have a greater impact on how long and how well we live than medical care. Our neighborhood affects our health more than our genetic code. These are some of the messages that help illustrate the growing understanding that the health of individuals and populations is influenced by a complex set of inter-related social and economic determinants including: income/wealth, education, employment status, housing, food security, early childhood experiences, environment (both built and natural), and discrimination based on race/ethnicity or other personal characteristics.

Recognizing and addressing the social determinants discussed in this report is a complex and important challenge for all of those interested in improving the population's health. The United States has made great advances in this field, but there is much work to be done here in the state and Hartford. Reducing poverty and income inequality, and the negative affects they have on health, will not happen overnight but can be achieved through the coordinated efforts of those working to improve health in Hartford. An important first step, and a goal of the Health Equity Alliance (HEA) project, is to engage residents and leaders in conversations about community conditions and the actions that can be taken to address differences in health among our residents.

Additionally, the soon to be released Healthy People 2020 will provide a framework for thinking about the health of our residents. It includes leading health indicators to reflect major health concerns and measure the overall health of the nation. Important factors such as, but not limited to, physical activity, overweight and obesity, tobacco use, and environmental quality are key indicators reflected in the information found in this document. Hartford has made progress toward the health improvement objectives outlined in Healthy People 2010. But to be successful in achieving all the Healthy People 2020 objectives, it will take public health, health care, and community-based organizations; and government working together to create an environment in which the healthy choice is the easy choice.

There is much to be done. The health indicators profile suggests that there are important opportunities to decrease health risk among Hartford residents. Too many Hartford residents are dying of heart disease, cancer, diabetes, and stroke, and too many of our residents are overweight or obese. At Health and Human Services, working with our partners, we will make progress in many areas, including:

- Collecting behavioral health data at the local level on a regular basis.
- Identifying and focusing resources to reduce risk factors for chronic disease.
- Promoting increased physical activity among youth and adults through communities, schools, and worksites.
- Expanding partnerships with healthcare providers, insurers, and other employers.

- Developing and supporting policies at the state and local level that support healthy environments and healthy behaviors.

To be successful in this effort to achieve health in Hartford, we need your help. You can promote the community's health by taking some simple actions to change your own health behaviors. There are many things you can do, but how about resolving TODAY to take actions like the following:

- Know Your Numbers – If you don't know your weight, your blood pressure, your cholesterol, your blood sugar levels, and other important personal health measurements, make an appointment today with your health provider to learn them and what they mean to you.
- Control Your Portions – Fill your plate with both the right foods and right amounts. Include more fruits, vegetables, and whole grains and less processed foods and sweetened drinks in your diet. If you want to know what a healthy plate looks like, ask your health care provider or call us.
- Move More – Get off the couch and take a walk or bike. Get a group of your friends to walk to the store, or to church, or around the block. Play a game outside with your children or grandchildren. Dance in your kitchen or living room while you do chores around the house. Every step counts…take more of them!
- Stop Smoking – Smoking is deadly and exposes both the smoker and those around them to countless health dangers. The most single important thing you can do for your health is to be tobacco-free. For more information, you can call the state quit line at 1-800-QUIT-NOW or call us to learn about smoking cessation programs.
- Get Some Sleep – Adequate rest is necessary for the body to protect and recharge itself, and for it to function properly.

TOGETHER,
we can truly make our city a
HEALTHY HARTFORD!

Appendix

Glossary

BIRTH WEIGHT: The first weight of a fetus or infant at time of delivery.

CAUSES OF DEATH: The causes of death to be entered on the medical certificate are all those diseases, morbid conditions, or injuries that either resulted in or contributed to death, or the circumstances of the accident or violence which produced such injuries.

CHRONIC LOWER RESPIRATORY DISEASE (CLRD): CLRD refers to chronic (ongoing) diseases that affect the lower respiratory tract (including the lungs). CLRD deaths in this report include asthma and emphysema.

CONGENITAL MALFORMATION: A physical defect present in a baby at birth, irrespective of whether the defect is caused by a genetic factor or by prenatal events that are not genetic. In a malformation, the development of a structure is arrested, delayed, or misdirected early in embryonic life and the effect is permanent.

INCIDENCE: The number of new cases of a disease in a defined population within a specified period of time (e.g. year).

INFANT DEATH: Death occurring to an individual of less than one year (365 days) of age.

INFANT MORTALITY RATE: A measure of the yearly rate of deaths in children less than one year old.

LOW BIRTH WEIGHT: A birth weight of less than 2,500 grams or approximately 5 lbs. and 8 oz.

MORBIDITY: The frequency of sickness of a specific disease in a specific population.

MORTALITY: The relative frequency of deaths in a specific population.

PREMATURE:A live birth or fetal death that occurs before the completion of the 37th week of gestation.

PRENATAL CARE: Prenatal care is the health care a woman gets while she is pregnant.

PREVALENCE: The total number of cases of a disease in the population at a given time, or the total number of cases in the population divided by the number of individuals in the population.

RATE: A rate is a measure of some event, disease, or condition in relation to a unit of population, along with some specification of time.

YEARS OF POTENTIAL LIFE LOSS (YPLL): is an estimate of the average years a person would have lived if he or she had not died prematurely. It is, therefore, a measure of premature mortality. As a method, it is an alternative to death rates that gives more weight to deaths that occur among younger people. Another alternative is to consider the effects of both disability and premature death using disability adjusted life years.

DEPARTMENT OF HEALTH AND HUMAN SERVICES
131 Coventry Street
Hartford, CT 06112
Tel: (860) 757-4700
Fax: (860) 722-6851
Department of Health and Human Services
Healthy Hartford
Follow HartfordHealth at
www.hartford.gov