

Connecticut Resident Mortality
Summary Tables by
Gender, Race, & Hispanic Ethnicity
1999–2001

Connecticut Department of Public Health
Health Information Systems & Reporting Section
Hartford, CT
June, 2005



Keeping Connecticut Healthy

Suggested Citation: Hynes, M.M., F.A. Amadeo, and L.M. Mueller. 2005. *1999-2001 Connecticut Resident Mortality Summary Tables by Gender, Race, and Hispanic Ethnicity*. Hartford, CT: Connecticut Department of Public Health.

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**Table 1. Leading Causes of Death¹ by Gender,
Connecticut Residents, 1996-1998 and 1999-2001²**

Cause of Death (ICD-10 classification)	1996-1998		1999-2001	
	All Deaths	Rank – Deaths ¹	All Deaths	Rank – Deaths ¹
<i>All Residents</i>				
Diseases of the heart	29,251	1	26,593	1
All cancer	21,300	2	21,125	2
Cerebrovascular disease	5,786	3	5,928	3
Chronic lower respiratory diseases ³	3,700	4	4,446	4
Unintentional injuries	3,158	6	3,227	5
Pneumonia & influenza	3,609	5	2,630	6
Diabetes mellitus	1,991	7	2,120	7
Septicemia	1,147	8	1,573	8
Nephritis, nephritic syndrome, nephrosis	1,061	9	1,559	9
Alzheimer's disease	763	12	1,544	10
<i>All Males</i>				
Diseases of the heart	13,582	1	12,519	1
All cancer	10,602	2	10,443	2
Cerebrovascular disease	2,132	3	2,199	3
Unintentional injuries	2,016	4	2,091	4
Chronic lower respiratory diseases ³	1,695	5	1,938	5
Pneumonia & influenza	1,621	6	1,095	6
Diabetes mellitus	933	7	977	7
Nephritis, nephritic syndrome, nephrosis	510	11	718	8
Suicide	647	8	685	9
Septicemia	509	12	674	10
<i>All Females</i>				
Diseases of the heart	15,669	1	14,074	1
All cancer	10,698	2	10,682	2
Cerebrovascular disease	3,654	3	3,729	3
Chronic lower respiratory diseases ³	2,005	4	2,508	4
Pneumonia & influenza	1,988	5	1,535	5
Diabetes mellitus	1,058	7	1,143	6
Unintentional injuries	1,142	6	1,136	7
Alzheimer's disease	541	10	1,094	8
Septicemia	638	8	899	9
Nephritis, nephritic syndrome, nephrosis	551	9	841	10

Notes:

1. Ranks are based on the National Center for Health Statistics (NCHS) leading causes of death list.
2. 1996-1998 deaths and 1999-2001 deaths are classified according to the ICD-9 and ICD-10 systems, respectively (see Appendix I). As such, cause of death classifications from these two periods are not exactly comparable.
3. The ICD-9 classification label (1996-1998 deaths) for this cause of death differs slightly from the ICD-10 classification label (1999-2001 deaths).

**Table 2. Summary of Male vs. Female Mortality Disparities¹
Connecticut Residents, 1996-1998 and 1999-2001²**

Cause of Death (ICD-10 classification)	1996-1998		1999-2001	
	Male-Female Relative Risk ^{3,4}	Excess Male Deaths ⁵	Male-Female Relative Risk ^{3,4}	Excess Male Deaths ⁵
All Causes	1.5**	4,428	1.4**	4,319
<i>Chronic Diseases</i>				
Heart disease	1.5**	1,526	1.6**	1,512
Cerebrovascular	1.1	36	1.1*	59
Hypertension-related	1.1**	91	1.1*	57
Diabetes	1.3**	80	1.3**	80
Diabetes-related	1.5**	375	1.4**	399
All cancer	1.4**	1,042	1.4**	1,013
Trachea, bronchus, & lung cancer ⁶	1.7**	815	1.6**	366
Colorectal cancer	1.4**	100	1.4**	112
Chronic lower respiratory diseases (CLRD) ⁶	1.4**	153	1.3**	142
CLRD-related ⁶	1.6**	385	1.5**	491
Chronic liver disease & cirrhosis	2.1**	95	2.1**	100
<i>Injury</i>				
Unintentional injuries	2.3**	382	2.5**	422
Motor vehicle crashes	2.1**	109	2.7**	129
Fall & fall-related injuries	2.0**	54	1.9**	45
Suicide	3.7**	159	4.5**	178
Homicide ⁶	3.5**	83	3.7**	61
All poisoning	2.8**	137	2.8**	161
Alcohol-induced	3.1**	78	3.4**	92
Drug-induced	2.6**	112	2.7**	149
<i>Infectious Diseases</i>				
Pneumonia & influenza	1.6**	200	1.4**	108
Septicemia	1.4**	45	1.3**	45
Septicemia-related	1.4**	178	1.3**	145
HIV infection	2.8**	119	2.4**	79

Notes:

- Includes all Connecticut male and female residents. Mortality disparities are assessed by: 1) the relative risk of the male vs. female age-adjusted mortality rate and 2) excess deaths among males.
- 1996-1998 deaths and 1999-2001 deaths are classified according to the ICD-9 and ICD-10 systems, respectively (see Appendix I). As such, cause of death classifications from these two periods are not exactly comparable.
- Relative risk is the ratio of the male Connecticut resident age-adjusted mortality rate (AAMR) to the female Connecticut resident AAMR (2000 U.S. standard population).
- Statistical tests were conducted to evaluate differences in male and female resident AAMRs. Following are explanations of the notations:
 - * Significantly different than the female resident rate at $p < .05$.
 - ** Significantly different than the female resident rate at $p < .01$.
- Excess deaths are those deaths that would not have occurred if the male population had the same rate as the female population, and are presented on an annualized or per year basis.
- The ICD-9 classification label (1996-1998 deaths) for this cause of death differs slightly from the ICD-10 classification label (1999-2001 deaths).

Table 3. Leading Causes of Death¹ by Gender, Black, Non-Hispanic Connecticut Residents, 1996-1998 and 1999-2001²

Cause of Death (ICD-10 classification)	1996-1998		1999-2001	
	All Deaths	Rank – Deaths ¹	All Deaths	Rank – Deaths ¹
<i>All Black, Non-Hispanic Residents</i>				
Diseases of the heart	1,612	1	1,419	1
All cancer	1,329	2	1,296	2
Unintentional injuries	281	5	311	3
Cerebrovascular disease	287	4	310	4
HIV	314	3	253	5
Diabetes mellitus	215	7	236	6
Nephritis, nephritic syndrome, nephrosis	104	9	158	7
Septicemia	97	10	148	8
Chronic lower respiratory diseases ³	95	11	136	9
Homicide ³	221	6	129	10
<i>All Black, Non-Hispanic Males</i>				
Diseases of the heart	748	1	706	1
All cancer	715	2	671	2
Unintentional injuries	201	4	230	3
HIV	213	3	177	4
Cerebrovascular disease	105	6	118	5
Homicide ³	179	5	113	6
Diabetes mellitus	100	7	97	7
Nephritis, nephritic syndrome, nephrosis	47	10	66	8
Chronic lower respiratory diseases	45	12	63	9
Septicemia	45	11	59	10
<i>All Black, Non-Hispanic Females</i>				
Diseases of the heart	864	1	713	1
All cancer	614	2	625	2
Cerebrovascular disease	182	3	192	3
Diabetes mellitus	115	4	139	4
Nephritis, nephritic syndrome, nephrosis	57	8	92	5
Septicemia	52	9	89	6
Unintentional injuries	80	7	81	7
HIV	101	5	76	8
Chronic lower respiratory diseases ³	50	10	73	9
Pneumonia & influenza	91	6	55	10

Notes:

1. Ranks are based on the National Center for Health Statistics (NCHS) leading causes of death list.
2. 1996-1998 deaths and 1999-2001 deaths are classified according to the ICD-9 and ICD-10 systems, respectively (see Appendix I). As such, cause of death classifications from these two periods are not exactly comparable.
3. The ICD-9 classification label (1996-1998 deaths) for this cause of death differs slightly from the ICD-10 classification label (1999-2001 deaths).

**Table 4. Summary of Male vs. Female Mortality¹
Black, Non-Hispanic Connecticut Residents, 1999-2001**

Cause of Death (ICD-10 classification)	Black Males		Black Females		Male-Female Relative Risk ^{3,4}	Male Excess Deaths ⁵
	Deaths	AAMR ²	Deaths	AAMR ²		
All Causes	2,919	1225.8	2,765	773.5	1.6**	359
<i>Chronic Diseases</i>						
Heart disease	706	341.3	713	210.1	1.6**	90
Cerebrovascular	118	61.4	192	58.0	1.1	2
Hypertension-related	168	78.6	208	61.1	1.3	12
Diabetes	97	46.8	139	40.2	1.2	5
Diabetes-related	330	158.9	439	128.4	1.2	21
All cancer	671	305.0	625	172.6	1.8**	97
Trachea, bronchus, & Lung cancer	188	80.5	133	37.2	2.2**	34
Colorectal cancer	65	27.5	79	22.9	1.2	4
Chronic lower respiratory diseases (CLRD)	63	35.4	73	21.5	1.6	8
CLRD-related	171	92.3	178	52.6	1.8**	25
Chronic liver disease & cirrhosis	38	11.7	30	7.4	1.6	5
<i>Injury</i>						
Unintentional injuries	230	62.1	81	18.5	3.4**	54
Motor vehicle crashes	74	17.4	14	—	—	—
Fall & fall-related injuries	20	—	9	—	—	—
Suicide	29	7.3	8	—	—	—
Homicide	113	22.9	16	—	—	—
All poisoning	79	18.4	41	8.4	2.2**	14
Alcohol-induced	28	8.0	18	—	—	—
Drug-induced	82	19.3	41	8.4	2.3**	15
<i>Infectious Diseases</i>						
Pneumonia & influenza	49	24.4	55	17.3	1.4	5
Septicemia	59	30.6	89	25.8	1.2	3
Septicemia-related	177	85.0	241	68.7	1.2	11
HIV infection	177	46.8	76	15.9	2.9**	39

Notes:

- Black, non-Hispanic male and female mortality is summarized by numbers of deaths, age-adjusted mortality rates, male-female relative risks of death, and male excess deaths.
- Age-adjusted mortality rates (AAMR) are per 100,000 population based on race and ethnicity specific population estimates. Age-adjusted rates were calculated by the direct method using the 2000 U.S. standard population. Rates were not calculated for fewer than 25 deaths.
- Relative risk is the ratio of the Connecticut black male resident age-adjusted mortality rate (AAMR) to the black female resident AAMR (2000 U.S. standard population). Relative risks were not calculated for fewer than 25 deaths in either the black male or female population.
- Statistical tests were conducted to evaluate differences in black male and female resident AAMRs. Following are explanations of the notations:
 - * Significantly different at $p < .05$.
 - ** Significantly different at $p < .01$.
 - Rate (and relative risk) were not calculated due to small numbers.
- Excess deaths are those deaths that would not have occurred if the black male population had the same rate as the black female population, and are presented on an annualized or per year basis.

Table 5. Summary of Black, Non-Hispanic vs. White, Non-Hispanic Mortality Disparities by Gender¹, Connecticut Residents, 1999-2001

Cause of Death (ICD-10 classification)	All		Males		Females	
	Black-White Relative Risk ^{2,3}	Excess (Fewer) Deaths ⁴	Black-White Relative Risk ^{2,3}	Excess (Fewer) Deaths ⁴	Black-White Relative Risk ^{2,3}	Excess (Fewer) Deaths ⁴
All Causes	1.3**	467	1.4**	288	1.2**	179
Chronic Diseases						
Heart disease	1.2**	91	1.3**	52	1.2**	39
Cerebrovascular	1.3**	22	1.2	8	1.3*	14
Hypertension-related	1.8**	57	2.0**	28	1.7**	29
Diabetes	2.6**	49	2.4**	19	2.9**	30
Diabetes-related	2.1**	141	2.0**	56	2.4**	85
All cancer	1.2**	82	1.4**	67	1.1	15
Trachea, bronchus, & lung cancer	1.1	12	1.4**	16	0.9	(4)
Colorectal cancer	1.3	10	1.2	3	1.4	7
Breast cancer (females only)					1.1	4
Prostate cancer (males only)			2.4**	19		
Chronic lower respiratory diseases (CLRD)	0.7**	(20)	0.8	(5)	0.6**	(15)
CLRD-related	0.8**	(21)	0.9	(4)	0.8**	(17)
Chronic liver disease & cirrhosis	1.3	5	1.2	2	1.4	3
Injury						
Unintentional injuries	1.4**	34	1.6**	30	1.1	4
Motor vehicle crashes	1.3	6	1.6*	9	—	—
Fall & fall-related injuries	1.1	1	—	—	—	—
Suicide	0.5**	(13)	0.5**	(9)	—	—
Homicide	9.8**	39	12.7**	35	—	—
All poisoning	1.4*	13	1.4	7	1.7*	6
Alcohol-induced	1.4	4	1.3	2	—	—
Drug-induced	1.6**	16	1.6*	10	1.8*	6
Infectious Diseases						
Pneumonia & influenza	0.9	(2)	0.9	(1)	0.9	(1)
Septicemia	2.3**	28	2.3**	11	2.3**	17
Septicemia-related	2.0**	70	2.0**	30	2.0**	40
HIV infection	15.7**	79	19.5**	56	13.3**	23

Notes:

- Mortality disparities are assessed by: 1) the relative risk of the black vs. white age-adjusted mortality rate and 2) excess deaths among blacks. Black and white race exclude persons of Hispanic ethnicity.
- Relative risk is the ratio of the black, non-Hispanic Connecticut resident age-adjusted mortality rate (AAMR) to the white, non-Hispanic Connecticut resident AAMR (2000 U.S. standard population). Relative risks are not calculated for fewer than 25 deaths in either the black or white population.
- Statistical tests were conducted to evaluate differences in black and white resident AAMRs. Following are explanations of the notations:
 - * Significantly different than the white, non-Hispanic resident rate at $p < .05$.
 - ** Significantly different than the white, non-Hispanic resident rate at $p < .01$.
 - Not calculated due to small numbers of deaths or no deaths.
- Excess deaths are those deaths that would not have occurred if the black population had the same rate as the white population, and are presented on an annualized or per year basis. Parentheses indicate fewer deaths. The total number of excess deaths is the sum of the total excess deaths of black males and females.

Table 6. Summary of Black, Non-Hispanic vs. White, Non-Hispanic Premature Mortality¹ Disparities by Gender, Connecticut Residents, 1999-2001

Cause of Death (ICD-10 classification)	All Residents	Males	Females
	Black-White Relative Risk ^{2,3}	Black-White Relative Risk ^{2,3}	Black-White Relative Risk ^{2,3}
All Causes	2.1**	2.3**	2.1**
<i>Chronic Diseases</i>			
Heart disease	2.0**	2.0**	2.6**
Cerebrovascular	2.6**	2.6**	2.9**
Hypertension-related	3.8**	4.0**	4.2**
Diabetes	2.9**	2.8**	3.4**
Diabetes-related	2.9**	2.8**	3.4**
All cancer	1.4**	1.6**	1.3**
Trachea, bronchus, & lung cancer	1.2	1.7**	1.0
Colorectal cancer	1.7**	1.8*	1.8*
Breast cancer (females only)			1.5*
Prostate cancer (males only)		2.8**	
Chronic lower respiratory diseases	1.2	1.4	1.1
CLRD-related	1.3*	1.4	1.4
Chronic liver disease & cirrhosis	1.5	1.5	1.7
<i>Injury</i>			
Unintentional injuries	1.6**	1.7**	1.6*
Motor vehicle crashes	1.3	1.6*	—
Fall & fall-related injuries	1.7	—	—
Suicide	0.6**	0.6*	—
Homicide	11.8**	16.2**	—
All poisoning	1.4*	1.4	1.8*
Alcohol-induced	1.3	1.3	—
Drug-induced	1.6**	1.5*	1.9*
<i>Infectious Diseases</i>			
Pneumonia & influenza	1.9*	2.7*	1.2
Septicemia	3.5**	3.5**	3.8**
Septicemia-related	3.1**	3.4**	3.2**
HIV infection	15.3**	17.9**	12.7**

Notes:

1. Premature mortality is measured by the “years of potential life lost” (YPLL) below a specified age. In this table, the YPLL represents the number of years of potential life lost by each death before age 75.
2. Relative risk is the ratio of the black Connecticut resident age-adjusted Years of Potential Life Lost (YPLL) rate to the white Connecticut resident YPLL (2000 U.S. standard population). Relative risks are not calculated for fewer than 25 deaths in either the black or white population.
3. Statistical tests were conducted to evaluate differences in black and white resident YPLLs. Following are explanations of the notations:

- * Significantly different than the white resident rate at $p < .05$.
- ** Significantly different than the white resident rate at $p < .01$.
- Rate not calculated due to small numbers.

**Table 7. Leading Causes of Death¹ by Gender,
Hispanic Connecticut Residents, 1996-1998 and 1999-2001²**

Cause of Death (ICD-10 classification)	1996-1998		1999-2001	
	All Deaths	Rank – Deaths ¹	All Deaths	Rank – Deaths ¹
<i>All Hispanic Residents</i>				
Diseases of the heart	499	1	563	1
All cancer	389	2	430	2
Unintentional injuries	212	3	246	3
HIV	182	4	152	4
Cerebrovascular disease	114	5	99	5
Diabetes mellitus	75	7	88	6
Chronic liver disease and cirrhosis	77	6	87	7
Chronic lower respiratory diseases ³	63	9	69	8
Septicemia	33	13	64	9
Homicide ³	69	8	64	10
<i>All Hispanic Males</i>				
Diseases of the heart	251	1	310	1
All cancer	208	2	235	2
Unintentional injuries	164	3	192	3
HIV	131	4	105	4
Chronic liver disease and cirrhosis	55	7	65	5
Homicide ³	60	5	51	6
Cerebrovascular disease	55	6	38	7
Diabetes mellitus	42	8	36	8
Suicide	34	9	34	9
Septicemia	15	13	30	10
<i>All Hispanic Females</i>				
Diseases of the heart	248	1	253	1
All cancer	181	2	195	2
Cerebrovascular disease	59	3	61	3
Unintentional injuries	48	5	54	4
Diabetes mellitus	33	6	52	5
HIV	51	4	47	6
Chronic lower respiratory diseases ³	31	8	42	7
Septicemia	18	11	34	8
Nephritis, nephritic syndrome, nephrosis	20	10	25	9
Chronic liver disease and cirrhosis	22	9	22	10

Notes:

1. Ranks are based on the National Center for Health Statistics (NCHS) leading causes of death list.
2. 1996-1998 deaths and 1999-2001 deaths are classified according to the ICD-9 and ICD-10 systems, respectively (see Appendix I).
As such, cause of death classifications from these two periods are not exactly comparable.
3. The ICD-9 classification label (1996-1998 deaths) for this cause of death differs slightly from the ICD-10 classification label (1999-2001 deaths).

**Table 8. Summary of Male vs. Female Mortality Disparities
Hispanic Connecticut Residents¹, 1999-2001**

Cause of Death (ICD-10 classification)	Hispanic Males		Hispanic Females		Male-Female Relative Risk ^{3,4}	Male Excess Deaths ⁵
	Deaths	AAMR ²	Deaths	AAMR ²		
All Causes	1,475	778.8	1,065	500.6	1.6**	176
<i>Chronic Diseases</i>						
Heart disease	310	220.8	253	144.6	1.5**	36
Cerebrovascular	38	28.9	61	37.9	0.8	(4)
Hypertension-related	31	21.3	54	29.7	0.7	(4)
Diabetes	36	19.5	52	28.9	0.7	(6)
Diabetes-related	145	97.9	160	86.3	1.1	6
All cancer	235	163.1	195	89.3	1.8**	35
Trachea, bronchus, & lung cancer	47	34.4	28	14.6	2.4*	9
Colorectal cancer	19	—	18	—	—	—
Breast cancer (females only)			30	11.9		
Prostate cancer (males only)	26	27.7				
Chronic lower respiratory diseases (CLRD)	27	21.6	42	25.5	0.8	(2)
CLRD-related	71	59.1	81	48.4	1.2	4
Chronic liver disease & cirrhosis	65	26.6	22	—	—	—
<i>Injury</i>						
Unintentional injuries	192	45.0	54	12.8	3.5**	46
Motor vehicle crashes	48	10.4	21	—	—	—
Fall & fall-related injuries	11	—	3	—	—	—
Suicide	34	8.4	9	—	—	—
Homicide	51	8.4	13	—	—	—
All poisoning	93	20.6	22	—	—	—
Alcohol-induced	52	17.5	6	—	—	—
Drug-induced	99	22.2	22	—	—	—
<i>Infectious Diseases</i>						
Pneumonia & influenza	15	—	22	—	—	—
Septicemia	30	21.7	34	16.6	1.3	2
Septicemia-related	81	54.6	75	38.2	1.4	8
HIV infection	105	30.0	47	11.3	2.7**	22

Notes:

- Hispanic male and female mortality is summarized by numbers of deaths, age-adjusted mortality rates, male-female relative risks of death, and male excess deaths. Hispanic persons may be of any race.
- Age-adjusted mortality rates (AAMR) are per 100,000 population based on race and ethnicity specific population estimates. Age-adjusted rates were calculated by the direct method using the 2000 U.S. standard population. Rates were not calculated for fewer than 25 deaths.
- Relative risk is the ratio of the Connecticut Hispanic male resident age-adjusted mortality rate (AAMR) to the Hispanic female resident AAMR (2000 U.S. standard population). Relative risks and excess deaths are not calculated for fewer than 25 deaths in either the Hispanic male or female population.
- Statistical tests were conducted to evaluate differences in Hispanic male and female resident AAMRs. Following are explanations of the notations:
 - * Significantly different at $p < .05$.
 - ** Significantly different at $p < .01$.
 - Rate (and relative risk) were not calculated due to small numbers.
- Excess deaths are those deaths that would not have occurred if the Hispanic male population had the same rate as the Hispanic female population, and are presented on an annualized or per year basis. Parentheses indicate fewer deaths.

Table 9. Summary of Hispanic vs. White, Non-Hispanic Mortality Disparities by Gender¹, Connecticut Residents, 1999-2001

Cause of Death (ICD-10 classification)	All		Males		Females	
	Hispanic – White Non-Hispanic Relative Risk ^{2,3}	Excess (Fewer) Deaths ⁴	Hispanic – White Non-Hispanic Relative Risk ^{2,3}	Excess (Fewer) Deaths ⁴	Hispanic – White Non-Hispanic Relative Risk ^{2,3}	Excess (Fewer) Deaths ⁴
All Causes	0.8**	(140)	0.9**	(53)	0.8**	(87)
Chronic Diseases						
Heart disease	0.8**	(39)	0.8**	(21)	0.8**	(18)
Cerebrovascular	0.7**	(13)	0.6**	(9)	0.8	(4)
Hypertension-related	0.7**	(12)	0.5**	(8)	0.8	(4)
Diabetes	1.6**	9	1.0	0	2.0**	9
Diabetes-related	1.4**	30	1.3	10	1.6**	20
All cancer	0.6**	(76)	0.8**	(24)	0.6**	(52)
Trachea, bronchus & lung cancer	0.5**	(28)	0.6**	(11)	0.4**	(17)
Colorectal cancer	0.5**	(14)	—	—	—	—
Breast cancer (females only)					0.5**	(12)
Prostate cancer (males only)			1.1	1		
Chronic lower respiratory diseases (CLRD)	0.6**	(14)	0.5**	(9)	0.7*	(5)
CLRD-related	0.7**	(27)	0.6**	(16)	0.7**	(11)
Chronic liver disease & cirrhosis	2.3**	14	2.7**	14	—	—
Injury						
Unintentional injuries	1.1	5	1.2	10	0.8	(5)
Motor vehicle crashes	1.0	0	0.9	(1)	—	—
Fall & fall-related injuries	—	—	—	—	—	—
Suicide	0.6**	(11)	0.6*	(7)	—	—
Homicide	4.2**	16	4.7**	13	—	—
All poisoning	1.3	9	1.5*	11	—	—
Alcohol-induced	2.1**	10	2.8**	11	—	—
Drug-induced	1.5**	14	1.8**	15	—	—
Infectious Diseases						
Pneumonia & influenza	0.6**	(8)	—	—	—	—
Septicemia	1.5*	8	1.6	4	1.5	4
Septicemia-related	1.2	9	1.3	6	1.1	3
HIV infection	10.5**	46	12.5**	32	9.4**	14

Notes:

- Mortality disparities are assessed by: 1) the relative risk of the Hispanic vs. white, non-Hispanic age-adjusted mortality rate and 2) excess deaths among Hispanics. Hispanic ethnicity includes persons of any race.
- Relative risk is the ratio of the Hispanic Connecticut resident age-adjusted mortality rate (AAMR) to the white, non-Hispanic Connecticut resident AAMR (2000 U.S. standard population). Relative risks and excess deaths are not calculated for fewer than 25 deaths in either the Hispanic or white population.
- Statistical tests were conducted to evaluate differences in Hispanic and white, non-Hispanic resident AAMRs. Following are explanations of the notations:
 - * Significantly different than the white resident rate at $p < .05$.
 - ** Significantly different than the white resident rate at $p < .01$.
 - Not calculated due to small numbers of deaths or no deaths.
- Excess deaths are those deaths that would not have occurred if the Hispanic population had the same rate as the white population, and are presented on an annualized or per year basis. Parentheses indicate fewer deaths. The total number of excess deaths is the sum of the total excess deaths of Hispanic males and females.

Table 10. Summary of Hispanic¹ vs. White, Non-Hispanic Premature Mortality² Disparities by Gender, Connecticut Residents, 1999-2001

Cause of Death (ICD-10 classification)	All Residents	Males	Females
	Hispanic - White, Non-Hispanic Relative Risk ^{3,4}	Hispanic - White, Non-Hispanic Relative Risk ^{3,4}	Hispanic - White, Non-Hispanic Relative Risk ^{3,4}
All Causes	1.3**	1.5**	1.2**
Chronic Diseases			
Heart disease	1.2*	1.3*	1.3
Cerebrovascular	1.2	1.4	1.1
Hypertension-related	1.3	1.1	1.7
Diabetes	1.8**	2.0*	1.8
Diabetes-related	1.9**	2.0**	2.0**
All cancer	0.7**	0.9	0.6**
Trachea, bronchus, & lung cancer	0.4**	0.6**	0.3**
Colorectal cancer	0.9	—	—
Breast cancer (females only)			0.6*
Prostate cancer (males only)		1.2	
Chronic Lower Respiratory Diseases	0.9	1.1	0.8
CLRD-related	0.8	0.9	0.7
Chronic liver disease & cirrhosis	2.4**	3.2**	—
Injury			
Unintentional injuries	1.4**	1.4**	1.4
Motor vehicle crashes	1.0	0.9	—
Fall & fall-related injuries	—	—	—
Suicide	0.7*	0.6*	—
Homicide	5.1**	5.9**	—
All poisoning	1.4*	1.5*	—
Alcohol-induced	2.1**	2.8**	—
Drug-induced	1.5**	1.7**	—
Infectious Diseases			
Pneumonia & influenza	0.9	—	—
Septicemia	2.3**	2.4*	2.4*
Septicemia-related	1.7**	2.0**	1.5
HIV infection	10.1**	11.2**	8.7**

Notes:

1. Hispanic ethnicity includes persons of any race.
2. Premature mortality is measured by the “years of potential life lost” (YPLL) below a specified age. In this table, the YPLL represents the number of years of potential life lost by each death before age 75.
3. Relative risk is the ratio of the Hispanic Connecticut resident age-adjusted Years of Potential Life Lost (YPLL) rate to the white, non-Hispanic Connecticut resident YPLL (2000 U.S. standard population). Relative risks are not calculated for fewer than 25 deaths in either the Hispanic or white, non-Hispanic population.
4. Statistical tests were conducted to evaluate differences in Hispanic and white resident YPLLs. Following are explanations of the notations:

* Significantly different than the white, non-Hispanic resident rate at $p < .05$.

** Significantly different than the white, non-Hispanic resident rate at $p < .01$.

— Rate not calculated due to small numbers of Hispanic deaths.

**Table 11. Leading Causes of Death¹ by Gender,
White, Non-Hispanic Connecticut Residents, 1996-1998 and 1999-2001²**

Cause of Death (ICD-10 classification)	1996-1998		1999-2001	
	All Deaths	Rank – Deaths ¹	All Deaths	Rank – Deaths ¹
<i>All White, Non-Hispanic Residents</i>				
Diseases of the heart	27,536	1	23,516	1
All cancer	19,855	2	18,687	2
Cerebrovascular disease	5,463	3	5,283	3
Chronic lower respiratory diseases ³	3,600	4	4,081	4
Unintentional injuries	2,836	6	2,424	5
Pneumonia & influenza	3,416	5	2,402	6
Diabetes mellitus	1,766	7	1,718	7
Alzheimer's disease	748	12	1,428	8
Septicemia	1,045	8	1,311	9
Nephritis, nephritic syndrome, nephrosis	951	9	1,288	10
<i>All White, Non-Hispanic Males</i>				
Diseases of the heart	12,772	1	10,880	1
All cancer	9,828	2	9,191	2
Cerebrovascular disease	2,012	3	1,946	3
Chronic lower respiratory diseases ³	1,645	5	1,760	4
Unintentional injuries	1,789	4	1,494	5
Pneumonia & influenza	1,524	6	990	6
Diabetes mellitus	825	7	808	7
Nephritis, nephritic syndrome, nephrosis	460	11	595	8
Suicide	586	8	576	9
Septicemia	461	10	553	10
<i>All White, Non-Hispanic Females</i>				
Diseases of the heart	14,764	1	12,636	1
All cancer	10,027	2	9,496	2
Cerebrovascular disease	3,451	3	3,337	3
Chronic lower respiratory diseases ³	1,955	4	2,321	4
Pneumonia & influenza	1,892	5	1,412	5
Alzheimer's disease	528	9	1,017	6
Unintentional injuries	1,047	6	930	7
Diabetes mellitus	941	7	910	8
Septicemia	584	8	758	9
Nephritis, nephritic syndrome, nephrosis	491	10	693	10

Notes:

1. Ranks are based on the National Center for Health Statistics (NCHS) leading causes of death list.
2. 1996-1998 deaths and 1999-2001 deaths are classified according to the ICD-9 and ICD-10 systems, respectively (see Appendix I). As such, cause of death classifications from these two periods are not exactly comparable.
3. The ICD-9 classification label (1996-1998 deaths) for this cause of death differs slightly from the ICD-10 classification label (1999-2001 deaths).

**Table 12. Summary of Male vs. Female Mortality¹,
White, Non-Hispanic, Connecticut Residents, 1999-2001**

Cause of Death (ICD-10 classification)	White Males		White Females		Male-Female Relative Risk ^{3,4}	Male Excess Deaths ⁵
	Deaths	AAMR ²	Deaths	AAMR ²		
All Causes	35,468	863.1	41,667	623.4	1.4**	3,283
<i>Chronic Diseases</i>						
Heart disease	10,880	266.3	12,636	175.5	1.5**	1,237
Cerebrovascular	1,946	49.2	3,337	45.5	1.1	49
Hypertension-related	1,585	38.8	2,540	35.8	1.1	41
Diabetes	808	19.2	910	14.1	1.4**	72
Diabetes-related	3,280	78.0	3,487	53.5	1.5**	343
All cancer	9,191	213.8	9,496	160.5	1.3**	764
Trachea, bronchus, & lung cancer	2,618	59.4	2,303	40.5	1.5**	278
Colorectal cancer	1,000	23.7	1,065	16.8	1.4**	97
Chronic lower respiratory diseases (CLRD)	1,760	43.3	2,321	35.1	1.2**	111
CLRD-related	4,033	98.2	4,480	67.9	1.4**	415
Chronic liver disease & cirrhosis	444	9.7	276	5.2	1.9**	69
<i>Injury</i>						
Unintentional injuries	1,494	38.2	930	16.1	2.4**	288
Motor vehicle crashes	409	11.0	186	4.2	2.6**	84
Fall & fall-related injuries	239	5.9	251	3.5	1.7**	32
Suicide	576	13.8	139	3.1	4.5**	149
Homicide	71	1.8	36	0.9	2.0*	12
All poisoning	555	13.6	222	5.0	2.7**	117
Alcohol-induced	290	6.3	99	2.1	3.0**	64
Drug-induced	502	12.4	206	4.7	2.6**	104
<i>Infectious Diseases</i>						
Pneumonia & influenza	990	25.9	1,412	18.6	1.4**	93
Septicemia	553	13.6	758	11.1	1.2*	34
Septicemia-related	1,722	42.0	2,285	34.2	1.2**	107
HIV infection	106	2.4	54	1.2	2.0**	18

Notes:

- White, non-Hispanic male and female mortality is summarized by numbers of deaths, age-adjusted mortality rates, male-female relative risks of death, and male excess deaths.
- Age-adjusted mortality rates (AAMR) are per 100,000 population based on race and ethnicity specific population estimates. Age-adjusted rates were calculated by the direct method using the 2000 U.S. standard population. Rates were not calculated for fewer than 25 deaths.
- Relative risk is the ratio of the Connecticut white male resident age-adjusted mortality rate (AAMR) to the white female resident AAMR (2000 U.S. standard population). Relative risks are not calculated for fewer than 25 deaths in either the white male or female population.
- Statistical tests were conducted to evaluate differences in white male and female resident AAMRs. Following are explanations of the notations:
 - * Significantly different at $p < .05$.
 - ** Significantly different at $p < .01$.
 - Rate (and relative risk) were not calculated due to small numbers.
- Excess deaths are those deaths that would not have occurred if the white male population had the same rate as the white female population, and are presented on an annualized or per year basis. Parentheses indicate fewer deaths.

Appendix I A. Coding for Causes of Death, 1999-2001¹

Cause of Death	ICD-10 Code
All Causes	A00.0 – Y89.9
Septicemia	A40 – A41
HIV Infection	B20 – B24
All Cancers	C00 – C97
<i>Colorectal Cancer</i>	C18 – C21
<i>Trachea, Bronchus, and Lung Cancer</i>	C33 – C34
<i>Female Breast Cancer</i>	C50
<i>Prostate Cancer</i>	C61
Diabetes Mellitus	E10 – E14
<i>Diabetes-Related Causes</i>	E10 – E14
Diseases of the Heart	I00 – I09, I11, I13, I20 – I51
Essential Hypertension & Hypertensive Renal Disease	I10, I12
<i>Hypertension-Related Causes</i>	I10, I12
Cerebrovascular Disease	I60 – I69
Pneumonia & Influenza	J10 – J18
Chronic Lower Respiratory Diseases	J40 – J47
<i>CLRD-Related Causes</i>	J40 – J47
Chronic Liver Disease and Cirrhosis	K70, K73 – K74
Unintentional Injuries	V01 – X59, Y85 – Y86
<i>Motor Vehicle Accidents</i>	V02 – V04, V09.0, V09.2, V12 – V14, V19.0 – V19.2, V19.4 – V19.6, V20 – V79, V80.3 – V80.5, V81.1, V82.0 – V82.1, V83 – V86, V87.0 – V87.8, V88.0 – V88.8, V89.0, V89.2
<i>Falls and Related Injuries</i>	W00 – W19
Suicide	X60 – X84, Y87.0)
Homicide	X85 – Y09, Y87.1)
<i>All Poisoning</i>	X40 – X49, X60 – X69, X85 – X90, X35.2, U016 – U017, Y10 – Y19
<i>Alcohol-Induced</i>	F10, G31.2, G62.1, I42.6, K29.2, K70, R78.0, X45, X65, Y15
<i>Drug-Induced</i>	F11.0 – F11.5, F11.7 – F11.9, F12.0 – F12.5, F12.7 – F12.9, F13.0 – F13.5, F13.7 – F13.9, F14.0 – F14.5, F14.7, F14.9, F15.0 – F15.5, F15.7 – F15.9, F16.0 – F16.5, F18.0 – F18.5, F18.7 – F18.9, F19.0 – F19.5, F19.7 – F19.9, X40 – X44, X60 – X64, X85, Y10 – Y145

¹Sub- and related categories of deaths are indented and italicized. Overlapping categories of death (alcohol-induced and drug-induced) are italicized only.

Appendix I B. Coding for Causes of Death, 1996-1998¹

Cause of Death	ICD-9 Code
All Causes	1-E999
Septicemia	038
HIV Infection	042-044
All Cancers	140-208
<i>Colorectal Cancer</i>	153.0-154.3, 154.8,159.0
<i>Lung and Other Respiratory Cancer</i>	160-165
<i>Female Breast Cancer</i>	174
<i>Prostate Cancer</i>	185
Diabetes Mellitus	250
<i>Diabetes-Related Causes</i>	250
Diseases of the Heart	390-398,402,404-429
Hypertension With or Without Renal Disease	401,403
<i>Hypertension-Related Causes</i>	401,403
Cerebrovascular Disease	430-438
Pneumonia & Influenza	480-487
Chronic Obstructive Pulmonary Disease	490-496
<i>COPD-Related Causes</i>	490-496
Chronic Liver Disease and Cirrhosis	571
Unintentional Injuries	E800-E949
<i>Motor Vehicle Accidents</i>	E810-E825
<i>Accidental Falls</i>	E880-E888
Suicide	E950-E959
Homicide and Legal Intervention	E960-E978
Injury and Other External Causes	E800-E999
<i>All Firearms</i>	E922.0-.3,E922.8-.9,E955.0-.4,E965.0-.4,E970,E985.0-.4
<i>All Poisoning</i>	E850-E869,E950-E952,E962,E972,E980-E982
<i>Alcohol-Induced</i>	291,303,305.0,357.5,425.5,535.3,571.0-3,790.3,E860
<i>Drug-Induced</i>	292,304,305.2-.9,E850-E858,E950.0-.5,E962.0,E980.0-.5

¹Sub- and related categories of deaths are indented and italicized. Overlapping categories of death (alcohol-induced and drug-induced) are italicized only.

Appendix II. Glossary

Age-adjusted mortality rates (AAMR) are used to compare relative mortality risk across groups and over time. They are not actual measures of mortality risk but rather an index of risk. They are weighted statistical averages of the age-specific death rates, in which the weights represent the fixed population proportions by age (Murphy 2000). The age-adjusted rates in these tables were computed by the direct method. Calculation of AAMRs was based on Fleiss's (1981) formula and calculation of the standard error of AAMRs was based on that of Keyfitz (1966).

Age standardization is a technique that allows for the comparison of death rates in two or more populations. The National Center for Health Statistics (NCHS) used the 1940 standard million population in reporting national mortality statistics for over 50 years. Implementation of the new year 2000 population standard began with deaths occurring in 1999. Age-adjustment based on the year 2000 standard often results in age-adjusted death rates that are larger than those based on the 1940 standard. The new standard affects trends in age-adjusted death rates for certain causes of death and decreases race and ethnicity differentials in age-adjusted death rates (Anderson and Rosenberg 1998).

Cause-of-death classification Connecticut resident deaths were compiled in accordance with the World Health Organization (WHO) regulations. 1999-2001 deaths were classified using the Tenth Revision of the International Classification of Diseases [ICD-10] (World Health Organization 1992). 1996-1998 deaths were classified using the Ninth Revision of the International Classification of Diseases [ICD-9] (World Health Organization 1977).

Tabulations of cause-of-death statistics are based on the **underlying cause of death** unless otherwise stated. The "underlying" cause of death is the disease or injury that initiated the series of events leading directly to death, or the circumstances of the event that resulted in the fatal injury. If more than one cause or condition of death is entered, the underlying cause is then determined by the sequence of conditions on the death certificate and selection rules of the ICD (Murphy 2000).

Examination of the combination of all listed causes can shed additional light on factors related to mortality. Therefore, for selected diseases, "**related**" causes of death including both underlying and non-underlying (or "contributing") causes, are presented in these tables. Appendix I contains the causes of deaths included in these tables with their ICD-10 and ICD-9 codes.

Cause-of-death rankings are based on the National Center for Health Statistics List of 113 Selected Causes of Death (Anderson 2001). Ranks are based on the total number of deaths occurring during a specific time period. These tables rank number of deaths by gender, race and ethnicity for the 1999-2001 and 1996-1998 periods.

Excess deaths refer to those deaths that would not have occurred if one population subgroup had the same death rate as another population subgroup (e.g., black vs. white or male vs. female). Excess deaths are calculated as follows:

$$\text{Excess deaths} = \text{Number of deaths} \times [1 - (1 / \text{relative risk})]$$

The estimated excess death figures provided in these tables use the overall age-adjusted death rate as the basis for assessing the relative risk of death in each race, ethnic, gender group. For purposes of these estimates, the relative risk is treated as being equal over all ages. This assumption may not be true to the same extent for each cause of death or for each race, ethnic, and gender subgroup.

Hispanic origin refers to people whose origins are from Spain, the Spanish-speaking countries of Central America, South America, and the Caribbean, or persons of Hispanic origin identifying themselves as Spanish, Spanish-American, Hispanic, Hispano, or Latino. Since 1988, the Connecticut death certificate has had a separate line item for Hispanic ethnicity. Individuals identified as “Hispanic” can be of any race, and are also counted in the race breakdown as either “white,” “black,” “Asian or Pacific Islander,” “American Indian,” or other.

Quality of Hispanic Origin data: In 1988, the Connecticut death certificate was revised to include a question regarding the Hispanic origin of the decedent and the change was implemented in 1989. There was an extensive amount of incomplete Hispanic origin information for the 1989 deaths with only 32.8% of 1989 Connecticut resident death certificates reporting Hispanic-origin status (Mueller, Cavacas, Amadeo et al. 1989). Although accuracy of Hispanic origin data improved during the decade, reporting is still incomplete. An analysis of the 1996-1998 Connecticut resident death certificates showed that Hispanic ethnicity was unknown for 3,074 decedents, or 3.5% of all death certificates for those years.

Reliability of Hispanic origin data nationwide was assessed by the National Center for Health Statistics (NCHS). Death rates for the Hispanic-origin population are affected by biases in the numerator (underreporting of deaths) and the denominator (underestimates of the population). Taking both sources of bias into account it was estimated that Hispanics death rates are understated by 2 percent in official mortality statistics of the U.S. produced by NCHS (Rosenberg, Maurer, Sorlie et al. 1999).

International Classification of Diseases (ICD-9, ICD-10) has been the internationally accepted coding system for determining cause of death since the early 1900s. It is periodically revised. The ninth revision (ICD-9) was in use from 1975 through 1998. Beginning with 1999 deaths, the tenth revision (ICD-10) is being used.

Preliminary estimates of the comparability of ICD-9 to ICD-10 have been published and indicate that the discontinuity in trends from 1998 to 1999 for some leading causes of death (septicemia, influenza and pneumonia, Alzheimer’s disease, nephritis, nephrotic syndrome, and nephrosis) is substantial (Anderson, Minino, Hoyert, et al. 2001).

Population bases for computing rates are taken from the U.S. Census Bureau *Estimates of the population of states by age, sex, race, and Hispanic origin*. These data are estimates of the population of Connecticut by 5-year age groups (age 0 to 4, 5 to 9,...85 and over), sex (male,

female), modified race (white; black; Native American including Alaska Natives; Asian and Pacific Islander) and Hispanic origin (Hispanic, non-Hispanic) for each year, July 1, 1996 through July 1, 2001.

Race refers to a population of individuals identified from a common history, nationality, or geographical place. Race is widely considered a valid scientific category, but not a valid biological or genetic category (Lewontin, 1995; Gould 1981). Available scientific evidence indicates that racial and ethnic classifications do not capture biological distinctiveness, and that there is more genetic variation within racial groups than there is between racial groups (Williams, Lavizzo-Mourey, and Warren 1994; American Anthropological Association 1998). Contemporary race divisions result from historical events and circumstances and reflect current social realities. Thus, racial categories may be viewed more accurately as proxies for social and economic conditions that put individuals at higher risk for certain disease conditions.

Mortality data are reported for two racial groups in Connecticut: white, non-Hispanic and black, non-Hispanic. Individuals identified as “Hispanic” can be of any race.

Quality of race data—Several studies have examined the reliability of racial status reported on the death certificate by comparing race on the death certificate with that reported on another data source, such as the census or a survey. Differences occur as a result of differences in who provides race information on the two records. Race information on the death certificate is reported by the funeral director as provided by a next of kin or on the basis of observation. Race on the census or on the Current Population Survey (CPS) is obtained by self-report of the individual or by another household member. As such, racial information reported on the census and CPS are considered more valid than death certificate information. High levels of agreement between the death certificate and the census or survey report are indicative of unbiased death rates by race (Hoyert, Kochanek, and Murphy 1999).

Several studies show that persons self-reported as American Indian or Asian on census or survey records are sometimes reported as white on the death certificate. The net effect of such misclassification is an underestimate of deaths and death rates for races other than white and black. In addition, undercoverage of minority groups in the census and resultant population estimates introduces biases into death rates by race (Hoyert, Kochanek, and Murphy 1999). It is estimated that the net effect of the combined bias due to race misclassification on death certificates and underenumeration on the 1990 census has resulted in an overstatement of death rates for whites and blacks by about one and five percent, respectively in official U.S. publications. Mortality rates are understated in official U.S. publications for American Indians and Asian or Pacific Islander, by about 21 percent and 11 percent, respectively (Rosenberg, Maurer, Sorlie, et al. 1999).

Random variation The mortality data in these tables represent all Connecticut resident deaths and are, therefore, not subject to sampling error. Mortality data, however, may be affected by random variation. When the number of events is small (less than 100) and the probability of such an event is small, random variation may be relatively large, and thus considerable caution must be used in interpreting the data. Random variation is typically measured in terms of variance or standard error. The following formulas were used in calculating the standard error in these tables:

A. *standard error of the age-adjusted mortality rate:*

$$\sqrt{\sum_{i=1}^{18} d_i \left(\frac{\text{std}_i}{n_i} \right)^2}$$

where

- Index i represents 18 age groups in five year increments ranging from ages 0 to 85 and older;
- d_i is the total number of deaths for age group i ;
- std_i is the standard population for age group i , and
- n_i is the population for age group i .

B. *standard error of the age-adjusted years of potential life lost:*

$$\frac{\sqrt{\sum_{i=1}^{15} d_i \left(\frac{\text{std}_i}{n_i} \text{YPLL}_i \right)^2}}{\sum_{i=1}^{15} \text{std}_i}$$

where d_i , std_i , and p_i are the same as indicated in the standard error formula. YPLL_i is the years of potential life lost for a given endpoint (age 75 in this report) within each age group i . The weighting factors are as follows: 74.5 for age group 1 (ages 0-4), 67.5 for age group 2 (ages 4-9), 62.5 for age group 2 (ages 10-15), etc. YPLL_i is zero for age groups 75 and older.

- **related cause of death** See Cause-of-death classification.

Relative risk is the ratio of the age-adjusted mortality rate in the minority (or male) population group to the age-adjusted mortality rate in the white (or female) population.

$$\text{Relative risk} = \frac{\text{Minority (or male) rate}}{\text{White (or female) rate}}$$

Years of potential life lost (YPLL) represents the number of years of potential life lost by each death before a predetermined end point (e.g., 65 or 75 years of age).

Whereas the crude and adjusted death rates are heavily influenced by the large number of deaths among the elderly, the YPLL measure provides a picture of premature mortality by weighting deaths that occur at younger ages more heavily than those occurring at older ages. It thereby emphasizes different causes of death. Age-adjusted YPLLs are calculated using the methodology of Romeder and McWhinnie (1977).

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