

Alzheimer's
Disease

Diabetes

Leading Causes of

Heart
Diseases

Accidents



in Tarrant County

Malignant
Neoplasms

Cerebrovascular
Diseases

2001 - 2003

Chronic Lower
Respiratory Diseases



**Tarrant County
Public Health**

Leading Causes of Death in Tarrant County 2001, 2002 and 2003



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CONTENTS

Abstract.....	iv
Introduction.....	1
Procedures for Ranking Causes of Death.....	1
Results.....	2
Race/Ethnicity Differences.....	9
Gender Differences.....	15
Comparison of Top Seven Leading Causes of Death.....	18
Heart Diseases.....	18
Malignant Neoplasms.....	22
Cerebrovascular Diseases.....	26
Chronic Lower Respiratory Diseases.....	30
Accidents.....	31
Diabetes.....	32
Alzheimer’s Disease.....	33
Limitations.....	34

List of Tables

Table 1: Mortality Rates by Gender, Race/ethnicity and Age-Group, Tarrant County, 2001 - 2003.....	3
Table 2: Ten Leading Causes of Death: Tarrant County, 2001 - 2003.....	8
Table 3: Ten Leading Causes of Death by Race/Ethnicity: Tarrant County, 2001.....	10
Table 4: Ten Leading Causes of Death by Race/Ethnicity: Tarrant County, 2002.....	12
Table 5: Ten Leading Causes of Death by Race/Ethnicity: Tarrant County, 2003.....	14
Table 6: Ten Leading Causes of Death by Gender: Tarrant County, 2001.....	15
Table 7: Ten Leading Causes of Death by Gender: Tarrant County, 2002.....	16
Table 8: Ten Leading Causes of Death by Gender: Tarrant County, 2003.....	17

List of Figures

Figure 1:	Mortality Rate by Gender - Tarrant County, 2001 - 2003.....	2
Figure 2:	Mortality Rate by Race/Ethnicity - Tarrant County, 2001 - 2003.....	2
Figure 3:	Mortality Rate by Age Group - Tarrant County 2001 - 2003.....	2
Figure 4:	Crude Death Rates by ZIP Code in Tarrant County, 2001.....	4
Figure 5:	Crude Death Rates by ZIP Code in Tarrant County, 2002.....	5
Figure 6:	Crude Death Rates by ZIP Code in Tarrant County, 2003.....	6
Figure 7:	Percentages of Top Ten Leading Causes of Death, Tarrant County, 2001 - 2003.....	7
Figure 8:	Crude Death Rate of Heart Diseases, Tarrant County, 2001 - 2003.....	18
Figure 9:	Mortality Rate of Heart Diseases by Race/Ethnicity, Tarrant County, 2001 - 2003.....	18
Figure 10:	Mortality Rate of Heart Diseases by Gender, Tarrant County, 2001 - 2003.....	18
Figure 11:	Crude Death Rate of Heart Disease in Tarrant County, 2001.....	19
Figure 12:	Crude Death Rate of Heart Disease in Tarrant County, 2002.....	20
Figure 13:	Crude Death Rate of Heart Disease in Tarrant County, 2003.....	21
Figure 14:	Crude Death Rate of Malignant Neoplasms, Tarrant County, 2001 - 2003.....	22
Figure 15:	Mortality Rate of Malignant Neoplasms by Race/Ethnicity, Tarrant County, 2001 - 2003.....	22
Figure 16:	Mortality Rate of Malignant Neoplasms by Gender, Tarrant County, 2001 - 2003.....	22
Figure 17:	Crude Death Rate of Malignant Neoplasms in Tarrant County, 2001.....	23
Figure 18:	Crude Death Rate of Malignant Neoplasms in Tarrant County, 2002.....	24
Figure 19:	Crude Death Rate of Malignant Neoplasms in Tarrant County, 2003.....	25
Figure 20:	Crude Death Rate of Cerebrovascular Diseases, Tarrant County, 2001 - 2003.....	26
Figure 21:	Mortality Rate of Cerebrovascular Disease by Race/Ethnicity, Tarrant County, 2001 - 2003.....	26
Figure 22:	Mortality Rate of Cerebrovascular Diseases by Gender, Tarrant County, 2001 - 2003.....	26

Figure 23: Crude Death Rate of Cerebrovascular Disease in Tarrant County, 2001.....	27
Figure 24: Crude Death Rate of Cerebrovascular Disease in Tarrant County, 2002.....	28
Figure 25: Crude Death Rate of Cerebrovascular Disease in Tarrant County, 2003.....	29
Figure 26: Crude Death Rate of Chronic Lower Respiratory Diseases, Tarrant County, 2001 - 2003.....	30
Figure 27: Mortality Rate of Chronic Lower Respiratory Diseases by Race/Ethnicity, Tarrant County, 2001 - 2003.....	30
Figure 28: Mortality Rate of Chronic Lower Respiratory Diseases by Gender, Tarrant County, 2001 - 2003.....	30
Figure 29: Crude Death Rate of Accidents, Tarrant County, 2001 - 2003.....	31
Figure 30: Mortality Rate of Accidents by Race/Ethnicity, Tarrant County, 2001 - 2003.....	31
Figure 31: Mortality Rate of Accidents by Gender, Tarrant County, 2001 - 2003.....	31
Figure 32: Crude Death Rate of Diabetes Mellitus, Tarrant County, 2001 - 2003.....	32
Figure 33: Mortality Rate of Diabetes Mellitus by Race/Ethnicity, Tarrant County, 2001 - 2003.....	32
Figure 34: Mortality Rate of Diabetes Mellitus by Gender, Tarrant County, 2001 - 2003.....	32
Figure 35: Crude Death Rate of Alzheimer’s Disease, Tarrant County, 2001 - 2003.....	33
Figure 36: Mortality Rate of Alzheimer’s Disease by Race/Ethnicity, Tarrant County, 2001 - 2003.....	33
Figure 37: Mortality Rate of Alzheimer’s Disease by Gender, Tarrant County, 2001 - 2003.....	33

ABSTRACT

OBJECTIVES

This report presents data on the 10 leading causes of death in Tarrant County by race/ethnicity, gender and geographic distribution of the death rate at the sub-county level for the years 2001, 2002 and 2003.

DATA SOURCES AND METHODS

The data used in this report is based on information from death records that were received by Texas Department of State Health Services for the years 2001, 2002 and 2003. The population values used to construct the crude rates are based on the 2000 U.S. Census and the estimation program utilized by the Texas State Demographer's Office. Causes of death classified by the *International Classification of Diseases, Tenth Revision (ICD-10)* are ranked according to the number of deaths assigned to rankable causes.¹ The 10 leading causes of death were analyzed further by race/ethnicity, gender and ZIP Code distribution. Because of small sample sizes in age group categories, the 10 leading causes of death were not analyzed by age group.

NOTABLE FINDINGS

- The number of deaths for Tarrant County has declined from 9,679 in 2001 to 9,507 in 2003.
- Overall, a slight decline in the crude death rate was documented in Tarrant County from 2001 to 2003. The crude death rate was 651 per 100,000 population in 2001, 647 per 100,000 population in 2002 and 609.8 per 100,000 population in 2003. (Table 1)
- The 10 leading causes of death were identical for 2001 and 2003 but the 9th and the 10th causes were different in 2002. (Table 2)
- **In 2001 and 2003, the 10 leading causes of death were, in rank order:**
 - Diseases of the heart
 - Malignant neoplasms (cancer)
 - Cerebrovascular diseases (stroke)
 - Chronic lower respiratory diseases
 - Accidents (unintentional injuries)
 - Diabetes mellitus
 - Alzheimer's disease
 - Influenza and pneumonia
 - Intentional self-harm (suicide)
 - Nephritis, nephrotic syndrome and nephrosis

¹ Anderson RN, Smith BL. Deaths: Leading causes for 2002. National Vital Statistics reports; vol 53 no 17. Hyattsville, Maryland: National Center for Health Statistics. 2005.

- The 10 Leading Causes of Death in 2001 and 2003 accounted for 77.4 percent and 76.9 percent of all deaths occurring in Tarrant County respectively.
- In 2002, the 10 leading causes of death in rank order were:
 - Diseases of the heart
 - Malignant neoplasms (cancer)
 - Cerebrovascular diseases (stroke)
 - Chronic lower respiratory diseases
 - Accidents (unintentional injuries)
 - Diabetes mellitus
 - Alzheimer's disease
 - Influenza and pneumonia
 - Septicemia
 - Chronic liver disease and cirrhosis
- The 10 leading causes of death in 2002 accounted for 77.6 percent of all deaths occurring in Tarrant County.
- The three leading causes of death - diseases of the heart, malignant neoplasms, and cerebrovascular diseases were identical for 2001, 2002 and 2003. They accounted for a little more than half of all deaths based on the rankable causes of death in 2001, 2002 and 2003.
- There was a slight decline in the number of deaths caused by the three leading causes of death - diseases of the heart, malignant neoplasms, and cerebrovascular diseases from 2001 to 2003.
- For both gender and race/ethnic groups, diseases of the heart and malignant neoplasms rank as the two leading causes of death for all three years. There was a variation in the ranking of the other eight causes of death by gender and race/ethnicity in all three years.

INTRODUCTION

Ranking causes of death is a widely-used method of presenting mortality statistics. Cause-of-death ranking is a useful tool for illustrating the relative burden of cause-specific mortality. It should be used, however with a clear understanding of what the rankings mean. Literally, the rankings denote the most frequently occurring causes of death among those causes eligible to be ranked. The top-ranking causes determine the leading causes of death. When a category representing an aggregate of smaller categories is ranked, its component parts are not ranked. The rankings do not necessarily denote the causes of death of greatest public health importance. Some causes of death of public health importance are excluded from the ranking procedure. Although not perfectly suitable in all circumstances, the current framework provides a rankable list of causes of death that has broad appeal and acceptance in the general public health community.

This report presents 2001, 2002 and 2003 data on the leading causes of death in Tarrant County by age, race/ethnicity, gender and geographic distribution of the death rates at the sub-county level. Detailed information about infant mortality can be found in the *Tarrant County Infant Mortality Report*; detailed information about suicide deaths can be found in the *Tarrant County Suicide Report* and about HIV/AIDS in the TCPH quarterly newsletter *AIDS Perspectives*.

PROCEDURES FOR RANKING CAUSES OF DEATH

The procedures used for ranking causes of death in Tarrant County are consistent with procedures adopted by National Center for Health Statistics (NCHS) for ranking causes of death. Causes of death are ranked according to the number of deaths assigned to rankable causes. The number of deaths is used as the ranking criteria because it most accurately reflects the frequency of cause-specific mortality. Although crude death rates technically could be used as a ranking criteria—the population denominator of the rate is constant across all cause-of-death categories—they are less than ideal. Crude death rates are typically expressed per 100,000 population and are often rounded to one decimal place, reducing the precision of the ranking criteria. This is especially problematic when ranking causes of death for small population subgroups or geographic areas, as it may be impossible to differentiate the ranks for several causes. Although the number of deaths was used to determine the rankings of causes of death in Tarrant County, the crude death rates were used for analyses of trends in causes of death.

Developed for use with ICD-10, the “List of 113 selected causes of death”¹ was used to select 50 rankable causes from which the leading causes presented in this report are derived. The overall mortality and leading causes of death were analyzed by age, gender, race/ethnicity and by geographic distribution at ZIP Code level. GIS was used in mapping the rates at the ZIP Code level. For convenience and ease of interpretation, the rates were categorized into quartiles with the highest quartile being the worst.

Text modified from Anderson RN, Smith BL. Deaths: Leading causes for 2002. National Vital Statistics reports; vol. 53 no. 17, pg. 3-7, Hyattsville, Maryland: National Center for Health Statistics. 2005.

¹ Anderson RN, Smith BL. Deaths: Leading causes for 2002. National Vital Statistics reports; vol. 53 no. 17, pg. 3-7, Hyattsville, Maryland: National Center for Health Statistics. 2005.

RESULTS

Before presenting the leading causes of death in Tarrant County, it is useful to examine the overall mortality rates by year, race/ethnicity, age and geographic distribution. The overall crude death rates, mortality rates by gender, race/ethnicity as well as age groups for Tarrant County in 2001, 2002 and 2003 are presented in Table 1.

In general, there has been a slight decline in the crude death rates from 651 per 100,000 population in 2001 to 609.8 in 2003. Females were consistently found to have higher death rates compared to males in all three years and a slight decline in the rates in both males and females was evident from 2001 to 2003 (Figure 1).

When analyzed by race/ethnicity, Whites had the highest death rates followed by Blacks, Hispanics and Others. This could be due to the fact that Whites are greater in number and probably older than the ethnic minority population. Consistent with the overall pattern, Figure 2 shows a slight decline in the rates from 2001 to 2003 for all races/ethnicities considered.

In accordance with the historic trends in death rates, the highest death rates were seen in the oldest age group (75 + years). The death rates for age group 0-4 years were higher than the rates for the age groups 15-15, 20-24, 25-29, 30-34 and 35-39 years (Figure 3).

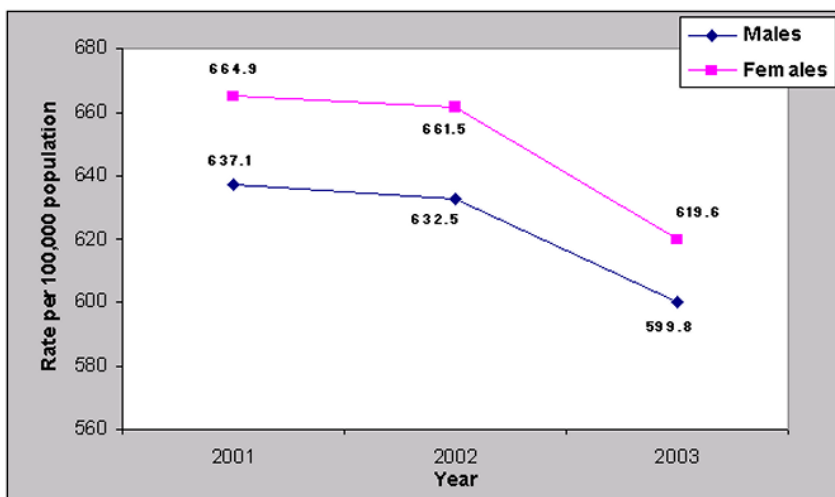


Figure 1: Mortality Rate By Gender - Tarrant County, 2001-2003

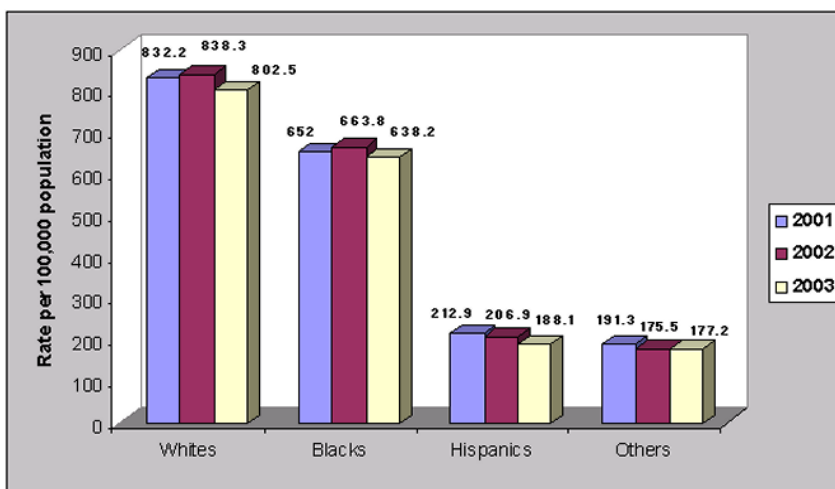


Figure 2: Mortality Rate By Race/Ethnicity - Tarrant County, 2001-2003

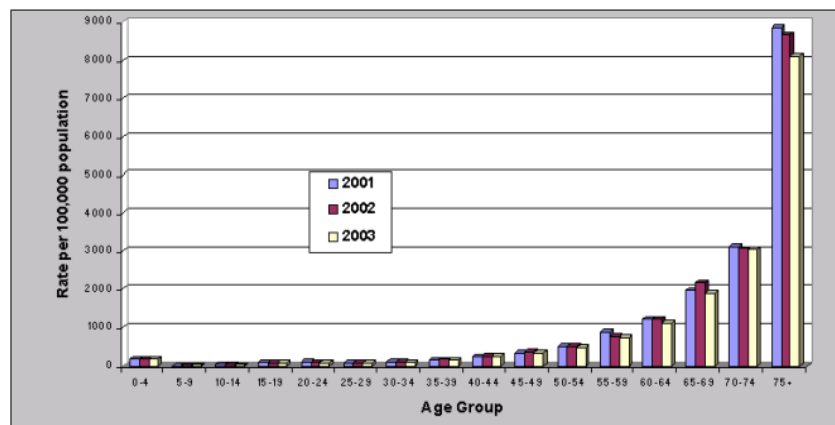


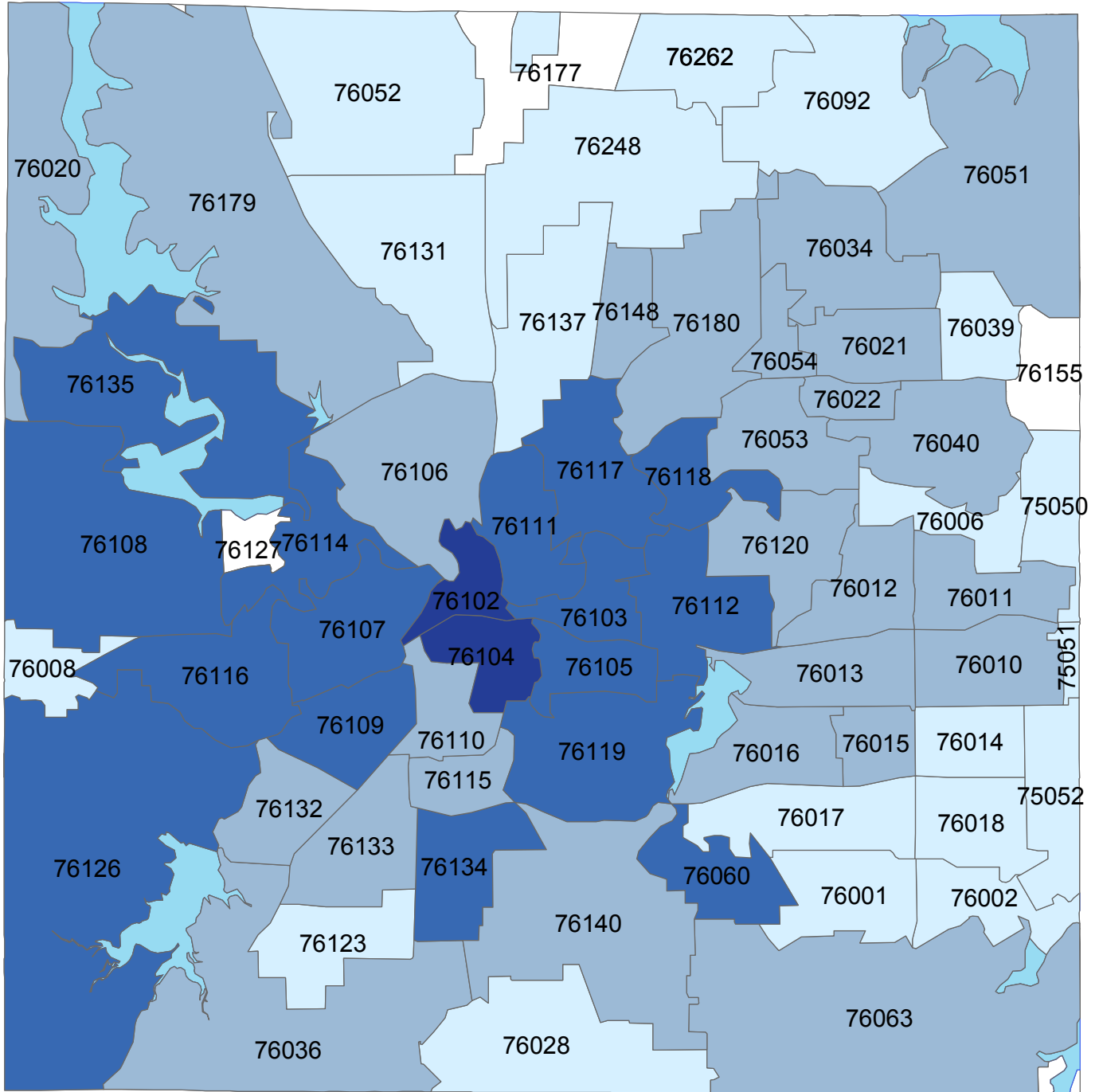
Figure 3: Mortality Rate By Age Group - Tarrant County 2001-2003

Table 1: Mortality Rate by Gender, Race / Ethnicity and Age-Group, Tarrant County, 2001-2003

	2001		2002		2003	
	Deaths (n)	Rate	Deaths (n)	Rate	Deaths (n)	Rate
Total	9679	651	9876	647	9507	609.8
Gender						
Males	4694	637.1	4787	632.2	4642	599.8
Females	4985	664.9	5089	661.5	4865	619.6
Race/Ethnicity						
Whites	7623	832.2	7729	838.3	7379	802.5
Blacks	1271	652	1338	663.8	1324	638.2
Hispanics	652	212.9	679	206.9	662	188.1
Others	133	191.3	131	175.5	142	177.2
Age-Group (years)						
0-4	226	191	215	176.8	235	184.7
5-9	7	6	15	12.8	13	11
10-14	19	16.4	27	22.7	16	13.2
15-19	88	81.7	78	70.6	75	66.3
20-24	109	103	89	81.6	78	70.3
25-29	92	78	75	62.9	97	80.7
30-34	113	91.4	120	93.2	117	88.8
35-39	178	140.1	195	155.6	189	154.3
40-44	288	231.6	310	243.9	307	239.8
45-49	343	324.4	397	358.8	373	324.1
50-54	471	520	486	525.7	463	488.5
55-59	568	889.6	551	781	560	735.1
60-64	557	1209.4	587	1209.6	583	1116.2
65-69	723	1965	816	2172.6	728	1896.2
70-74	965	3108.2	965	3069.3	965	3059.3
75+	4923	8870	4943	8687	4704	8102

Crude death rate is per 100,000 population
Population estimates based on 2000 census

Figure 4: Crude Death Rates by ZIP Code in Tarrant County, 2001



Legend

- 40.9 - 417.3
- 417.4 - 834.6
- 834.7 - 1252.0
- 1252.1 - 1669.3
- No Case
- Water

THIS MAP WAS PREPARED BY THE TARRANT COUNTY PUBLIC HEALTH DEPARTMENT FOR ITS USE, AND MAY BE REVISED AT ANY TIME WITHOUT NOTIFICATION TO ANY USER.

THE TARRANT COUNTY PUBLIC HEALTH DEPARTMENT DOES NOT GUARANTEE THE CORRECTNESS OR ACCURACY OF ANY FEATURES ON THIS MAP. TARRANT COUNTY ASSUMES NO RESPONSIBILITY IN CONNECTION THEREWITH.

Source: Mortality Data from TDSHS



Figure 7: Percentages Of Ten Leading Causes Of Death, Tarrant County, 2001-2003

The ten leading causes of death in Tarrant County for 2001, 2002 and 2003 are summarized in Table 2. The 10 leading causes of death were similar in 2001 and 2003, but the 9th and the 10th causes were different in 2002. The 10 leading causes of death in 2001 and 2003 in rank order are as follows: Diseases of heart, Malignant neoplasms (Cancer) Cerebrovascular diseases (Stroke), Chronic lower respiratory diseases, Accidents (Unintentional injuries), Diabetes mellitus, Alzheimer’s disease, Influenza and pneumonia, Intentional self-harm (Suicide), and Nephritis, nephrotic syndrome and nephrosis. These accounted for 77.4 percent and 76.9 percent of all deaths occurring in Tarrant County in 2001 and 2003 respectively (Figure 4).

In 2002, the 10 leading causes of death in rank order were: Diseases of heart, Malignant neoplasms, Cerebrovascular diseases, Chronic lower respiratory diseases, Accidents (Unintentional injuries), Diabetes mellitus, Alzheimer’s disease, Influenza and pneumonia, Septicemia, and Chronic liver disease and cirrhosis. These accounted for 77.6 percent of all deaths occurring in Tarrant County in 2002 (Figure 4).

The positioning of the three leading causes of death - Diseases of heart, Malignant neoplasms, and Cerebrovascular diseases remained unchanged from 2001 to 2003, and accounted for a little more than half of all deaths occurring due to the rankable causes of death in all the three years. From 2001 to 2003, there was a slight decline in the number of deaths caused by the three leading causes of death. In 2003, the number of deaths by diseases of heart, malignant neoplasms, and cerebrovascular diseases were 2,572, 2,055, and 702 respectively. (Table 2)

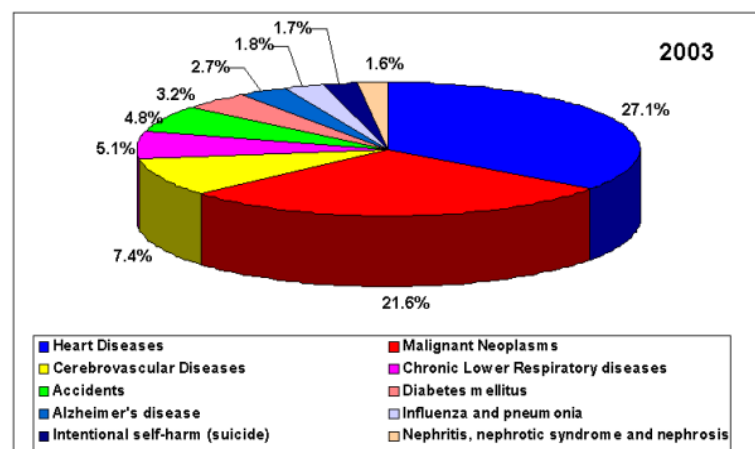
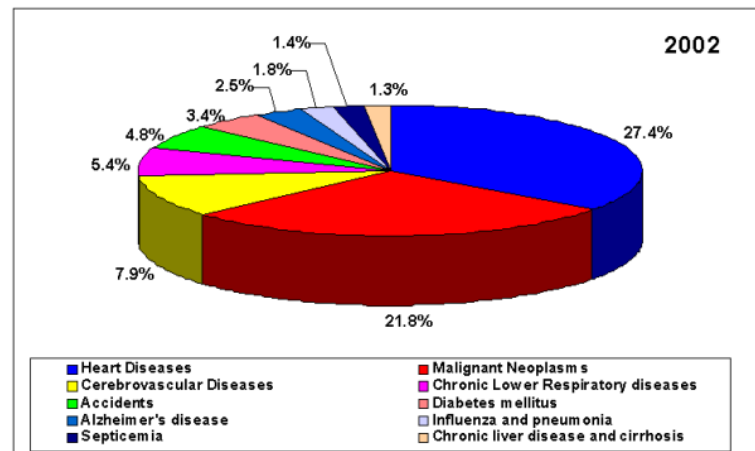
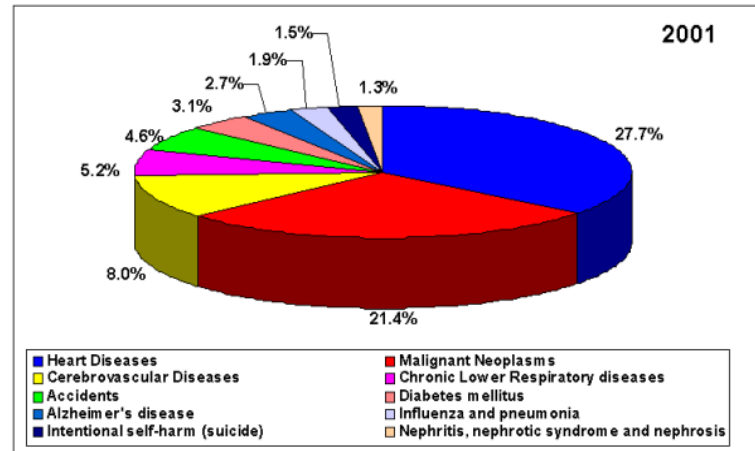


Table 2: Ten Leading Causes of Death: Tarrant County, 2001-2003

Cause of Death and Year	ICD-10 Code ¹	Rank ²	Deaths (n)	Percentage of total deaths ³	Rate per 100,000 population ³
2001					
All causes		....	9679	100	651.0
Diseases of heart	I00-I09, I11, I13, I20-I51	1	2682	27.7	180.4
Malignant neoplasms	C00-C97	2	2067	21.4	139.0
Cerebrovascular diseases	I60-I69	3	775	8.0	52.1
Chronic lower respiratory diseases	J40-J47	4	504	5.2	33.9
Accidents	V01-X59, Y85-Y86	5	446	4.6	30.0
Diabetes mellitus	E10-E14	6	300	3.1	20.2
Alzheimer's disease	G30	7	261	2.7	17.6
Influenza and pneumonia	J10-J18	8	180	1.9	12.1
Intentional self-harm (suicide)	X60-X84, Y87.0	9	143	1.5	9.6
Nephritis, nephrotic syndrome and nephrosis	N00-N07, N17-N19, N25-N27	10	129	1.3	8.7
2002					
All causes		....	9876	100	647.0
Diseases of heart	I00-I09, I11, I13, I20-I51	1	2708	27.4	177.4
Malignant neoplasms	C00-C97	2	2150	21.8	140.9
Cerebrovascular diseases	I60-I69	3	778	7.9	51.0
Chronic lower respiratory diseases	J40-J47	4	532	5.4	34.9
Accidents	V01-X59, Y85-Y86	5	470	4.8	30.8
Diabetes mellitus	E10-E14	6	331	3.4	21.7
Alzheimer's disease	G30	7	249	2.5	16.3
Influenza and pneumonia	J10-J18	8	179	1.8	11.7
Septicemia	A40-A41	9	137	1.4	9.0
Chronic liver disease and cirrhosis	K70, K73-K74	10	133	1.3	8.7
2003					
All causes		....	9507	100	609.8
Diseases of heart	I00-I09, I11, I13, I20-I51	1	2572	27.1	165.0
Malignant neoplasms	C00-C97	2	2055	21.6	131.8
Cerebrovascular diseases	I60-I69	3	702	7.4	45.0
Chronic lower respiratory diseases	J40-J47	4	482	5.1	30.9
Accidents	V01-X59, Y85-Y86	5	454	4.8	29.1
Diabetes mellitus	E10-E14	6	302	3.2	19.4
Alzheimer's disease	G30	7	258	2.7	16.5
Influenza and pneumonia	J10-J18	8	170	1.8	10.9
Intentional self-harm (suicide)	X60-X84, Y87.0	9	166	1.7	10.6
Nephritis, nephrotic syndrome and nephrosis	N00-N07, N17-N19, N25-N27	10	148	1.6	9.5

... Category not applicable

¹ International Classification of Diseases, Tenth Revision

² Rank based on number of deaths

³ Rounded up to 1 decimal place

Population estimates based on 2000 census

Race / Ethnicity Differences

Table 3 shows variation across race/ethnicity groups in the 10 leading causes of death in Tarrant County in 2001. The four race/ethnicity groups (Whites, Blacks, Hispanics & Others) share 7 of the leading causes. Heart diseases and malignant neoplasms ranked first and second, respectively, in Whites, Blacks and Hispanics. In “Others”, malignant neoplasm was the leading cause of death, with heart diseases second. Cerebrovascular diseases ranked third in Whites, Blacks and Others, but ranked fourth in Hispanics.

Chronic lower respiratory diseases ranked fourth in Whites, sixth in Blacks and Others, but failed to rank in the 10 leading causes of death for Hispanics. Accidents (unintentional injuries) ranked third in Hispanics, fourth in Blacks, and Others; and fifth in Whites. Alzheimer’s disease ranked sixth in Whites, eighth in Others, but was not ranked in the top 10 leading causes of death in Blacks and Hispanics. Diabetes mellitus and Influenza and Pneumonia were ranked in the 10 leading causes of death in all four races/ethnicities. Diabetes mellitus ranked fifth in Blacks and Hispanics, seventh in Whites and ninth in Others. Influenza and Pneumonia ranked eight in Whites and Others, ninth in Hispanics and tenth in Blacks.

Intentional self-harm (suicide) ranked fifth in other, ninth in Whites, tenth in Hispanics, but failed to rank among the 10 leading causes of death in Blacks. Nephritis, nephrotic syndrome and nephrosis also was not ranked in the 10 leading causes of death in Hispanics, but was ranked eighth in Others, ninth in Blacks, and tenth in Whites.

Table 3: Ten Leading Causes Of Death By Race/Ethnicity : Tarrant County, 2001

Cause of Death	ICD-10 Code ¹	Whites				Blacks				Hispanics				Others			
		Rank ²	Deaths (n)	Percentage of total deaths ³	Rates per 100,000 population ³	Rank ²	Deaths (n)	Percentage of total deaths ³	Rates per 100,000 population ³	Rank ²	Deaths (n)	Percentage of total deaths ³	Rates per 100,000 population ³	Rank ²	Deaths (n)	Percentage of total deaths ³	Rates per 100,000 population ³
All cause		....	7623	100	832.2	....	1271	100	652.0	....	652	100	212.9	....	133	100	191.3
Diseases of heart	I00-I09, I11, I13, I20-I51	1	2179	28.6	237.9	1	341	26.8	174.9	1	134	20.6	43.8	2	28	21.1	40.3
Malignant neoplasms	C00-C97	2	1630	21.4	177.9	2	282	22.2	144.7	2	115	17.6	37.5	1	40	30.1	57.5
Cerebrovascular diseases	I60-I69	3	625	8.2	68.2	3	102	8.0	52.3	4	36	5.5	11.8	3	12	9.0	17.3
Chronic lower respiratory diseases	J40-J47	4	441	5.8	48.1	6	51	4.0	26.2	11	7	1.1	2.3	6	5	3.8	7.2
Accidents	V01-X59, Y85-Y86	5	306	4.0	33.4	4	66	5.2	33.9	3	66	10.1	21.5	4	8	6.0	11.5
Alzheimer's disease	G30	6	237	3.1	25.9	12	15	1.2	7.7	11	7	1.1	2.3	8	2	1.5	2.9
Diabetes mellitus	E10-E14	7	201	2.6	21.9	5	63	5.0	32.3	5	35	5.4	11.4	9	1	0.8	1.4
Influenza and pneumonia	J10-J18	8	148	1.9	16.2	10	18	1.4	9.2	9	12	1.8	3.9	8	2	1.5	2.9
Intentional self-harm (suicide)	X60-X84, Y87.0	9	116	1.5	12.7	15	9	0.7	4.6	10	11	1.7	3.6	5	7	5.3	10.1
Nephritis, nephrotic syndrome and nephrosis	N00-N07, N17-N19, N25-N27	10	97	1.3	10.6	9	23	1.8	11.8	11	7	1.1	2.3	8	2	1.5	2.9
Septicemia	A40-A41	11	86	1.1	9.4	14	10	0.8	5.1	10	11	1.7	3.6	10	0	0.0	0.0
Human immunodeficiency virus (HIV) disease	B20-B24	17	25	0.3	2.7	7	33	2.6	16.9	10	11	1.7	3.6	10	0	0.0	0.0
Parkinson's disease	G20-G21	12	76	1.0	8.3	19	3	0.2	1.5	15	2	0.3	0.7	9	1	0.8	1.4
Aortic aneurysm and dissection	I71	16	30	0.4	3.3	16	8	0.6	4.1	16	1	0.2	0.3	9	1	0.8	1.4
Chronic liver disease and cirrhosis	K70, K73-K74	12	75	1.0	8.2	15	9	0.7	4.6	7	22	3.4	7.2	8	2	1.5	2.9
Certain conditions originating in the perinatal period	P00-P96	14	48	0.6	5.2	11	17	1.3	8.7	5	35	5.4	11.4	8	2	1.5	2.9
Congenital malformations, deformations and chromosomal abnormalities	Q00-Q99	16	33	0.4	3.6	13	11	0.9	5.6	8	16	2.5	5.2	7	3	2.3	4.3
Assault (homicide)	X85-Y09, Y87.1	15	38	0.5	4.1	8	27	2.1	13.9	6	30	4.6	9.8	8	2	1.5	2.9

.... Category not applicable

² Rank based on number of deaths

³ Rounded up to 1 decimal place

Population estimates based on 2000 census

Table 4 contrasts leading causes of death by race/ethnicity in Tarrant County in 2002. The four race/ethnicity groups share 6 of the leading causes. Heart diseases and malignant neoplasms ranked first and second, respectively in all four groups. Cerebrovascular diseases ranked third in Whites, Blacks and Others, but ranked fourth in Hispanics. Chronic lower respiratory diseases ranked fourth in Whites, seventh in Blacks and Others, but failed to rank among the 10 leading causes of death for Hispanics.

Accidents (unintentional injuries) ranked third in Hispanics, fourth in Others, and fifth in Whites and Blacks. Alzheimer's disease ranked sixth in Whites, eighth in Others, but was not ranked in the top 10 leading causes of death in Blacks and Hispanics. Diabetes mellitus was ranked in the 10 leading causes of death in all four races/ethnicities. It ranked fourth in Blacks and Others, fifth in Hispanics, and seventh in Whites. Influenza and Pneumonia ranked eighth in Whites and Others, but was not ranked in the 10 leading causes of death in Blacks and Hispanics. Intentional self-harm (suicide) ranked ninth in Whites and Others, but failed to be ranked in the 10 leading causes of death in Blacks and Hispanics. Septicemia was ranked seventh in Others but was not ranked in the 10 leading causes of death in Blacks and Hispanics. Certain conditions originating in the perinatal period ranked fifth in Others, sixth in Blacks, and Hispanics, but ranked 19th in Whites. Likewise, HIV was ranked eighth in Blacks and Others, but ranked 12th in Hispanics and 16th in Whites. Assault homicide ranked fifth in Others, eighth in Hispanics, ninth in Blacks, but ranked 20th in Whites.

It should be noted that in Whites, intentional self-harm (suicide), and septicemia tied at the ninth position. In Others, certain conditions originating in the perinatal period, assault (homicide) and nephritis, nephrotic syndrome and nephrosis were tied at the fifth position and Alzheimer's disease, influenza and pneumonia, Parkinson's disease, HIV, essential hypertension and meningitis were tied at the eighth position. This problem is commonly encountered when ranking causes of death for small population subgroups.

Table 4: Ten Leading Causes of Death by Race / Ethnicity : Tarrant County, 2002

Cause of Death	ICD-10 Code ¹	Whites			Blacks			Hispanics			Others						
		Rank ²	Deaths (n)	Percentage of total deaths ³	Rates per 100,000 population ³	Rank ²	Deaths (n)	Percentage of total deaths ³	Rates per 100,000 population ³	Rank ²	Deaths (n)	Percentage of total deaths ³	Rates per 100,000 population ³				
All causes		....	7729	100	838.3	....	1338	100	663.8	....	678	100	206.6	....	131	100	175.5
Diseases of heart	I00-I09, I11, I13, I20-I51	1	2132	27.6	231.2	1	389	28.8	197.9	1	144	21.2	43.9	1	33	25.2	44.2
Malignant neoplasms	C00-C97	2	1727	22.3	187.3	2	266	19.9	132.0	2	129	19.0	39.3	2	28	21.4	37.5
Cerebrovascular diseases	I60-I69	3	628	8.1	68.1	3	103	7.7	51.1	4	33	4.9	10.1	3	14	10.7	18.8
Chronic lower respiratory diseases	J40-J47	4	487	6.3	52.8	7	34	2.5	18.9	12	9	1.3	2.7	7	2	1.5	2.7
Accidents	V01-X59, Y85-Y86	5	323	4.2	35.0	5	58	4.3	28.8	3	83	12.2	25.3	4	6	4.6	8.0
Alzheimer's disease	G30	6	222	2.9	24.1	12	19	1.4	9.4	13	7	1.0	2.1	8	1	0.8	1.3
Diabetes mellitus	E10-E14	7	219	2.8	23.8	4	75	5.6	37.2	5	31	4.6	9.4	4	6	4.6	8.0
Influenza and pneumonia	J10-J18	8	156	2.0	16.9	11	20	1.5	9.9	15	5	0.7	1.5	8	1	0.8	1.3
Intentional self-harm (suicide)	X60-X84, Y87.0	9	103	1.3	11.2	16	9	0.7	4.5	12	9	1.3	2.7	9	0	0.0	0.0
Septicemia	A40-A41	9	103	1.3	11.2	11	20	1.5	9.9	10	12	1.8	3.7	7	2	1.5	2.7
Parkinson's disease	G20-G21	10	99	1.3	10.7	22	2	0.1	1.0	18	2	0.3	0.6	8	1	0.8	1.3
Chronic liver disease and cirrhosis	K70, K73-K74	11	96	1.2	10.4	14	12	0.9	6.0	7	22	3.2	6.7	6	3	2.3	4.0
Certain conditions originating in the perinatal period	P00-P96	19	32	0.4	3.5	6	36	2.7	17.9	6	25	3.7	7.6	5	4	3.1	5.4
Human immunodeficiency virus (HIV) disease	B20-B24	16	42	0.5	4.6	8	27	2.0	13.4	12	9	1.3	2.7	8	1	0.8	1.3
Assault (homicide)	X85-Y09, Y87.1	20	25	0.3	2.7	9	26	1.9	12.9	8	17	2.5	5.2	5	4	3.1	5.4
Nephritis, nephrotic syndrome and nephrosis	N00-N07, N17-N19, N25-N27	12	68	0.9	7.4	10	23	1.7	11.4	11	10	1.5	3.0	5	4	3.1	5.4
Congenital malformations, deformations and chromosomal abnormalities	Q00-Q99	21	24	0.3	2.6	15	11	0.8	5.5	9	15	2.2	4.6	7	2	1.5	2.7
Essential (primary) hypertension and hypertensive renal disease	I10, I12	14	65	0.8	7.0	13	13	1.0	6.4	11	10	1.5	3.0	8	1	0.8	1.3
Viral hepatitis	B15-B19	23	14	0.2	1.5	21	3	0.2	1.5	18	2	0.3	0.6	7	2	1.5	2.7
Meningitis	G00, G03	29	0	0	0.0	22	2	0.1	1.0	20	0	0.0	0.0	8	1	0.8	1.3

... Category not applicable

² Rank based on number of deaths

³ Rounded up to 1 decimal place

Population estimates based on 2000 census

Table 5 shows the 10 leading causes of death by race/ethnicity in Tarrant County in 2003. The top two leading causes of death – Heart diseases, and malignant neoplasms are identical in Whites, Blacks, and Others. In Hispanics, the top two leading causes of death switch position with malignant neoplasms coming up as the leading cause followed by heart diseases. Cerebrovascular diseases ranked third in Whites and in Blacks, but ranked fourth in Hispanics and Others. Chronic lower respiratory diseases ranked fourth in Whites, sixth in Blacks, 11th in Hispanics and 10th in Others. Accidents ranked as the fifth leading cause of death in Whites and Blacks, but ranked third in Hispanics and Others. Alzheimer’s disease, diabetes mellitus, intentional self-harm (suicide), influenza and pneumonia, and nephritis, nephrotic syndrome and nephrosis also ranked in the 10 leading causes of deaths in Whites and in Others. In Blacks however, intentional self-harm (suicide), and influenza and pneumonia failed to be ranked in the 10 leading causes. Instead, certain conditions originating in the perinatal period, HIV, essential hypertension and assault (homicide) made the list of the 10 leading causes of death in Blacks.

Likewise in Hispanics, influenza and pneumonia did not rank in the 10 leading causes of death, instead, certain conditions originating in the perinatal period, assault (homicide), chronic liver disease and cirrhosis, and congenital malformations, deformations and chromosomal abnormalities were included in the leading causes of death. In Others, six causes were tied at 10th place- chronic lower respiratory diseases, congenital malformations, deformations and chromosomal abnormalities, septicemia, aortic aneurysm and dissection, pneumonitis due to solids and liquids, and cholelithiasis and other disorders of the gallbladder. As stated earlier, this problem is frequently encountered when ranking causes of death for small population subgroups.

Table 5: Ten Leading Causes of Death by Race / Ethnicity : Tarrant County, 2003

Cause of Death	ICD-10 Code ¹	Whites			Blacks			Hispanics			Others		
		Rank ²	Deaths (n)	Percentage of total deaths ³	Rates per 100,000 population ³	Rank ²	Deaths (n)	Percentage of total deaths ³	Rates per 100,000 population ³	Rank ²	Deaths (n)	Percentage of total deaths ³	Rates per 100,000 population ³
All cause		....	7379	100	802.5	....	1324	100	638.2	....	142	100	177.2
Diseases of heart	I00-I09, I11, I13, I20-I51	1	2040	27.6	221.9	1	377	28.5	181.7	2	123	18.6	34.9
Malignant neoplasms	C00-C97	2	1619	21.9	176.1	2	271	20.5	130.6	1	134	20.2	38.1
Cerebrovascular diseases	I60-I69	3	523	7.1	56.9	3	112	8.5	54.0	4	50	7.6	14.2
Chronic lower respiratory diseases	J40-J47	4	426	5.8	46.3	6	44	3.3	21.2	11	11	1.7	3.1
Accidents	V01-X59, Y85-Y86	5	321	4.4	34.9	5	55	4.2	26.5	3	60	9.1	17.0
Alzheimer's disease	G30	6	222	3	24.1	8	24	1.8	11.6	12	9	1.4	2.6
Diabetes mellitus	E10-E14	7	199	2.7	21.6	4	58	4.4	28.0	5	40	6	11.4
Intentional self-harm (suicide)	X60-X84, Y87.0	8	141	1.9	15.3	14	8	0.6	3.9	9	13	2	3.7
Influenza and pneumonia	J10-J18	9	133	1.8	14.5	10	21	1.6	10.1	14	7	1.1	2.0
Nephritis, nephrotic syndrome and nephrosis	N00-N07, N17-N19, N25-N27	10	109	1.5	11.9	8	24	1.8	11.6	10	12	1.8	3.4
Certain conditions originating in the perinatal period	P00-P96	16	37	0.5	4.0	7	40	3.0	19.3	6	31	4.7	8.8
Human immunodeficiency virus (HIV) disease	B20-B24	18	23	0.3	2.5	9	23	1.7	11.1	12	9	1.4	2.6
Essential (primary) hypertension and hypertensive renal disease	I10, I12	12	76	1	8.3	9	22	1.7	10.6	16	4	0.6	1.1
Assault (homicide) and cirrhosis	X85-Y09, Y87.1	15	41	0.6	4.5	9	22	1.7	10.6	7	20	3	5.7
Chronic liver disease	K70, K73-K74	10	108	1.5	11.7	13	9	0.7	4.3	7	20	3	5.7
Congenital malformations, deformations and chromosomal abnormalities	Q00-Q99	16	40	0.5	4.4	12	12	0.9	5.8	8	15	2.3	4.3
Septicemia	A40-A41	11	89	1.2	9.7	11	20	1.5	9.6	13	8	1.2	2.3
Aortic aneurysm and dissection	I71	14	48	0.7	5.2	16	4	0.3	1.9	16	4	0.6	1.1
Pneumonitis due to solids and liquids	J69	15	43	0.6	4.7	17	2	0.2	1.0	18	0	0	0.0
Cholelithiasis and other disorders of gallbladder	K80-K82	20	6	0.1	0.7	18	1	0.1	0.5	19	0	0	0.0

... Category not applicable

² Rank based on number of deaths

³ Rounded upto 1 decimal place

Population estimates based on 2000 census

GENDER DIFFERENCES

Table 6 compares the leading causes of death by gender in Tarrant County in 2001. Heart diseases and malignant neoplasms were ranked as the first and second leading causes of death respectively in both males and females. Accidents were ranked third in males and seventh in females. Cerebrovascular disease and chronic lower respiratory diseases were ranked fourth and fifth in males but were ranked third and fourth in females. Diabetes mellitus ranked sixth in both males and females. Intentional self-harm (suicide) and assault (homicide) ranked seventh and eighth in males but failed to be ranked in the 10 leading causes of death in females. In males, Alzheimer's disease and assault were tied at the eighth position, and chronic liver disease and cirrhosis and certain conditions originating in the perinatal period were tied at the 10th position. As mentioned earlier, this could be partly explained due to the small sizes of some population subgroups. Although chronic liver disease and cirrhosis and certain conditions originating in the perinatal period were included in the 10 leading causes of death in males, they failed to make the list in females. Similarly, nephritis, nephritic syndrome and nephrosis and septicemia were ranked ninth and 10th in females but failed to be ranked in the 10 leading causes of death in males.

Table 6: Ten Leading Causes of Death by Gender: Tarrant County, 2001

Cause of Death	ICD-10 Code ¹	Males				Females			
		Rank ²	Deaths (n)	Percentage of total deaths ³	Rates per 100,000 population ³	Rank ²	Deaths (n)	Percentage of total deaths ³	Rates per 100,000 population ³
All cause		....	4694	100	637.1	....	4985	100	664.7
Diseases of heart	I00-I09, I11, I13, I20-I51	1	1291	27.5	175.2	1	1393	27.9	185.7
Malignant neoplasms	C00-C97	2	1047	22.3	142.1	2	1019	20.4	135.9
Accidents	V01-X59, Y85-Y86	3	304	6.5	41.3	7	142	2.8	18.9
Cerebrovascular diseases	I60-I69	4	288	6.1	39.1	3	487	9.8	64.9
Chronic lower respiratory diseases	J40-J47	5	267	5.7	36.2	4	237	4.8	31.6
Diabetes mellitus	E10-E14	6	134	2.9	18.2	6	166	3.3	22.1
Intentional self-harm (suicide)	X60-X84, Y87.0	7	114	2.4	15.5	15	29	0.6	3.9
Alzheimer's disease	G30	8	75	1.6	10.2	5	186	3.7	24.8
Assault (homicide)	X85-Y09, Y87.1	8	75	1.6	10.2	16	25	0.5	3.3
Influenza and pneumonia	J10-J18	9	74	1.6	10.0	8	106	2.1	14.1
Chronic liver disease and cirrhosis	K70, K73-K74	10	67	1.4	9.1	13	42	0.8	5.6
Certain conditions originating in the perinatal period	P00-P96	10	67	1.4	9.1	14	35	0.7	4.7
Nephritis, nephrotic syndrome and nephrosis	N00-N07, N17-N19, N25-N27	11	53	1.1	7.2	9	76	1.5	10.1
Septicemia	A40-A41	12	40	0.9	5.4	10	67	1.3	8.9

... Category not applicable

² Rank based on number of deaths

³ Rounded up to 1 decimal place

Population estimates based on 2000 census

Table 7 shows the 10 leading causes of death by gender in Tarrant County in 2002. Heart diseases and malignant neoplasms were ranked as the first and second leading causes of death respectively in both males and females. Accidents were ranked third in males and seventh in females. Cerebrovascular disease and chronic lower respiratory diseases were ranked fourth and fifth in males but were ranked third and fourth in females. Diabetes mellitus ranked sixth in both males and females. It should be noted that the top six leading causes of death by gender remained unchanged in 2001 and 2003. Chronic liver disease and cirrhosis and intentional self-harm (suicide) were ranked seventh and eighth in males but failed to be ranked in the 10 leading causes of death in females. Likewise, septicemia and essential hypertension were ranked ninth and 10th in females, but failed to rank in the 10 leading causes in males.

Table 7: Ten Leading Causes of Death by Gender: Tarrant County, 2002

Cause of Death	ICD-10 Code ¹	Males				Females			
		Rank ²	Deaths (n)	Percentage of total deaths ³	Rates per 100,000 population ³	Rank ²	Deaths (n)	Percentage of total deaths ³	Rates per 100,000 population ³
All cause		....	4787	100	632.2	....	5089	100	661.5
Diseases of heart	I00-I09, I11, I13, I20-I51	1	1316	27.5	173.8	1	1393	27.4	181.1
Malignant neoplasms	C00-C97	2	1131	23.6	149.4	2	1020	20.0	132.6
Accidents	V01-X59, Y85-Y86	3	329	6.9	43.5	7	141	2.8	18.3
Cerebrovascular diseases	I60-I69	4	281	5.9	37.1	3	497	9.8	64.6
Chronic lower respiratory diseases	J40-J47	5	227	4.7	30.0	4	305	6.0	39.6
Diabetes mellitus	E10-E14	6	169	3.5	22.3	6	162	3.2	21.1
Chronic liver disease and	K70, K73-K74	7	96	2.0	12.7	15	37	0.7	4.8
Intentional self-harm (suicide)	X60-X84, Y87.0	8	90	1.9	11.9	16	31	0.6	4.0
Alzheimer's disease	G30	9	81	1.7	10.7	5	168	3.3	21.8
Influenza and pneumonia	J10-J18	10	74	1.5	9.8	8	105	2.1	13.6
Septicemia	A40-A41	14	50	1.0	6.6	9	87	1.7	11.3
Essential (primary) hypertension and hypertensive renal disease	I10, I12	16	30	0.6	4.0	10	59	1.2	7.7

.... Category not applicable

² Rank based on number of deaths

³ Rounded upto 1 decimal place

Population estimates based on 2000 census

Table 8 shows the 10 leading causes of death by gender in Tarrant County in 2003. It is interesting to note that the first six leading causes of death by gender in 2003 were the same as seen in 2001 and 2002. Once again, intentional self-harm (suicide) and chronic liver disease and cirrhosis were ranked seventh and eighth in males but failed to be ranked in the 10 leading causes of death in females. Nephritis, nephrotic syndrome and nephrosis were ranked 10th in both males and females. Although septicemia was ranked ninth in females, it failed to be ranked in 10 leading causes of death in males.

Table 8: Ten Leading Causes of Death by Gender: Tarrant County, 2003

Cause of Death	ICD-10 Code ¹	Males				Females			
		Rank ²	Deaths (n)	Percentage of total deaths ³	Rates per 100,000 population ³	Rank ²	Deaths (n)	Percentage of total deaths ³	Rates per 100,000 population ³
All cause		....	4642	100	599.8	....	4865	100	619.6
Diseases of heart	I00-I09, I11, I13, I20-I51	1	1268	27.3	163.8	1	1304	26.8	166.1
Malignant neoplasms	C00-C97	2	1050	22.6	135.7	2	1005	20.7	128.0
Accidents	V01-X59, Y85-Y86	3	307	6.6	39.7	7	148	3.0	18.8
Cerebrovascular diseases	I60-I69	4	234	5	30.2	3	408	8.4	52.0
Chronic lower respiratory diseases	J40-J47	5	223	4.8	28.8	4	259	5.3	33.0
Diabetes mellitus	E10-E14	6	141	3	18.2	6	161	3.3	20.5
Intentional self-harm (suicide)	X60-X84, Y87.0	7	128	2.8	16.5	12	38	0.8	4.8
Chronic liver disease and cirrhosis	K70, K73-K74	8	93	2	12.0	11	44	0.9	5.6
Alzheimer's disease	G30	9	84	1.8	10.9	5	174	3.6	22.2
Influenza and pneumonia	J10-J18	10	73	1.6	9.4	8	97	2.0	12.4
Nephritis, nephrotic syndrome and nephrosis	N00-N07, N17-N19, N25-N27	10	75	1.6	9.7	9	73	1.5	9.3
Septicemia	A40-A41	14	43	0.9	5.6	9	75	1.5	9.6
Atherosclerosis	I70	18	13	0.3	1.7	10	49	1.0	6.2
Certain conditions originating in the perinatal period	P00-P96	12	62	1.3	8.0	10	48	1.0	6.1

.... Category not applicable

² Rank based on number of deaths

³ Rounded upto 1 decimal place

Population estimates based on 2000 census

COMPARISON OF TOP SEVEN LEADING CAUSES OF DEATH, TARRANT COUNTY, 2001-2003

This section focuses on comparing the top seven leading causes of death in Tarrant County for 2001, 2002 and 2003. The top seven leading causes of death were chosen because the position of these seven causes of death remained unchanged from 2001 to 2003 (Table 2).

Heart Diseases

There was a steady decline in the crude death rates for heart diseases from 180.4 per 100,000 population in 2001 to 165 per 100,000 population in 2003 (Figure 8). A corresponding decrease in the actual number of deaths was also documented from 2001 to 2003 (Table 2).

When stratified further by race/ethnicity, the death rates of heart diseases had declined in Whites, Hispanics and Others, but a slight increase in Blacks was observed from 2001 to 2003 (Figure 9).

In both males and females, there was a decline in the crude death rates of heart disease from 2001 to 2003. The death rates in males, however were consistently lower than that of females in 2001, 2002 and 2003 (Figure 10).

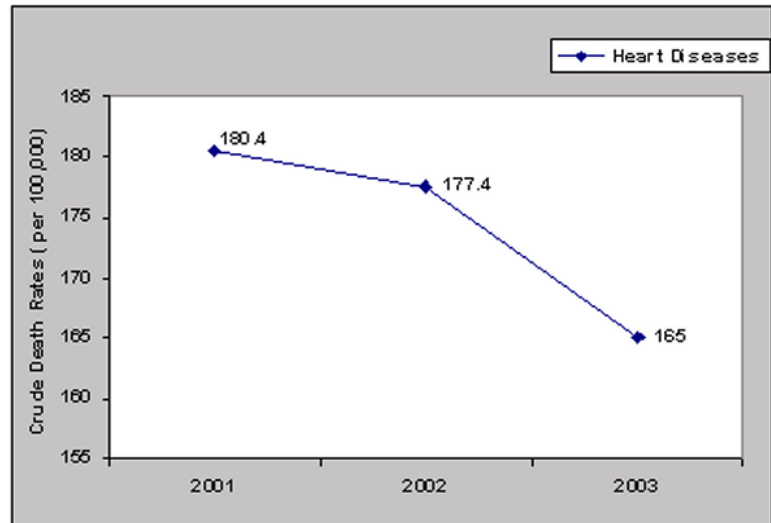


Figure 8: Crude Death Rate of Heart Diseases, Tarrant County, 2001-2003

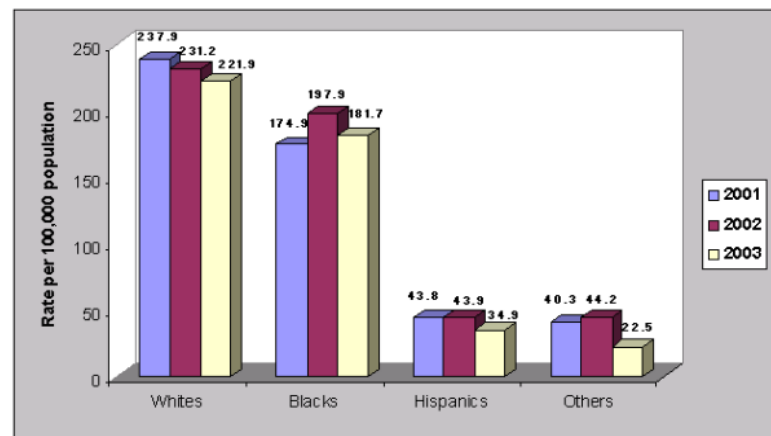


Figure 9: Mortality Rate of Heart Diseases by Race/Ethnicity, Tarrant County, 2001-2003

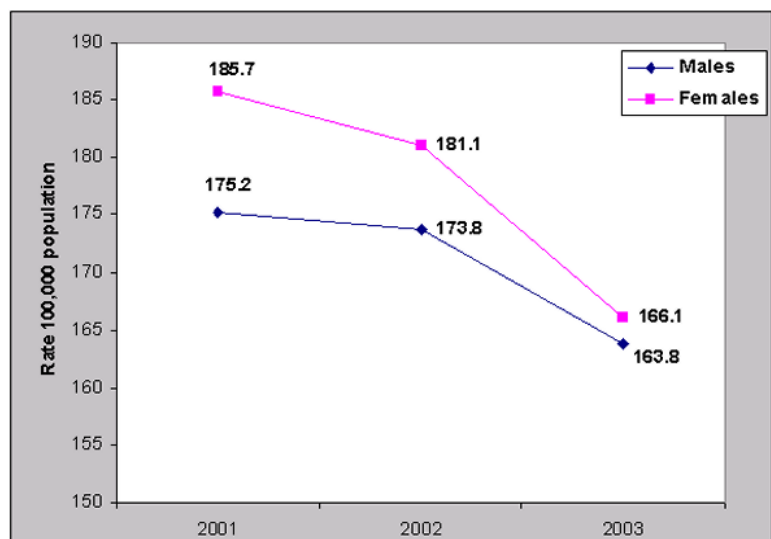
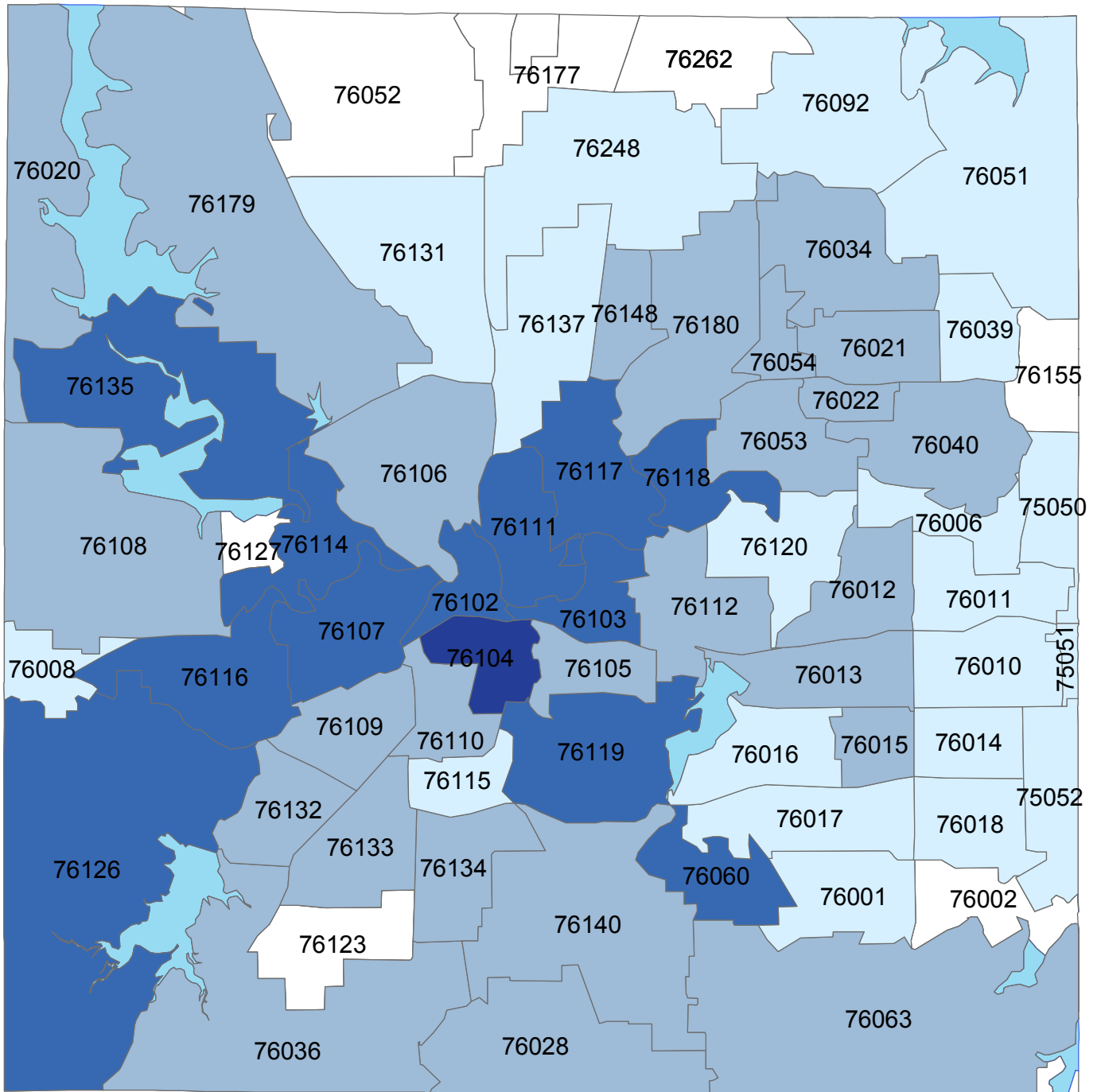


Figure 10: Mortality Rate of Heart Diseases by Gender, Tarrant County, 2001-2003

Figure 11: Crude Death Rate of Heart Disease in Tarrant County, 2001



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Source: Mortality Data from TDSHS

Legend







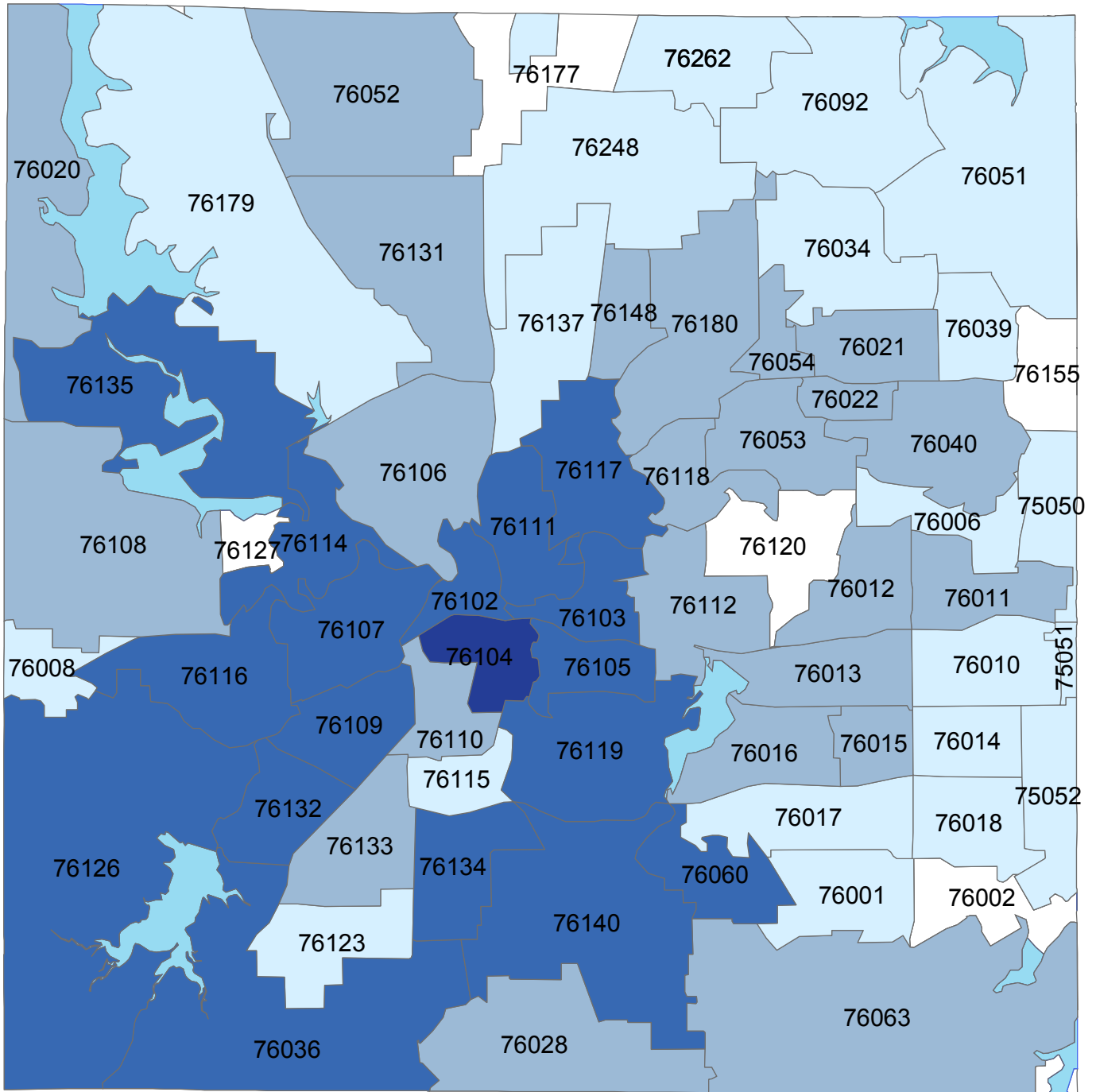
- | | | | |
|---|-----------------|---|---------|
|  | 29.05 - 130.41 |  | No Case |
|  | 130.42 - 260.83 |  | Water |
|  | 260.84 - 391.24 | | |
|  | 391.25 - 521.65 | | |



Figure 12: Crude Death Rate of Heart Disease in Tarrant County, 2002



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Source: Mortality Data from TDSHS

Legend







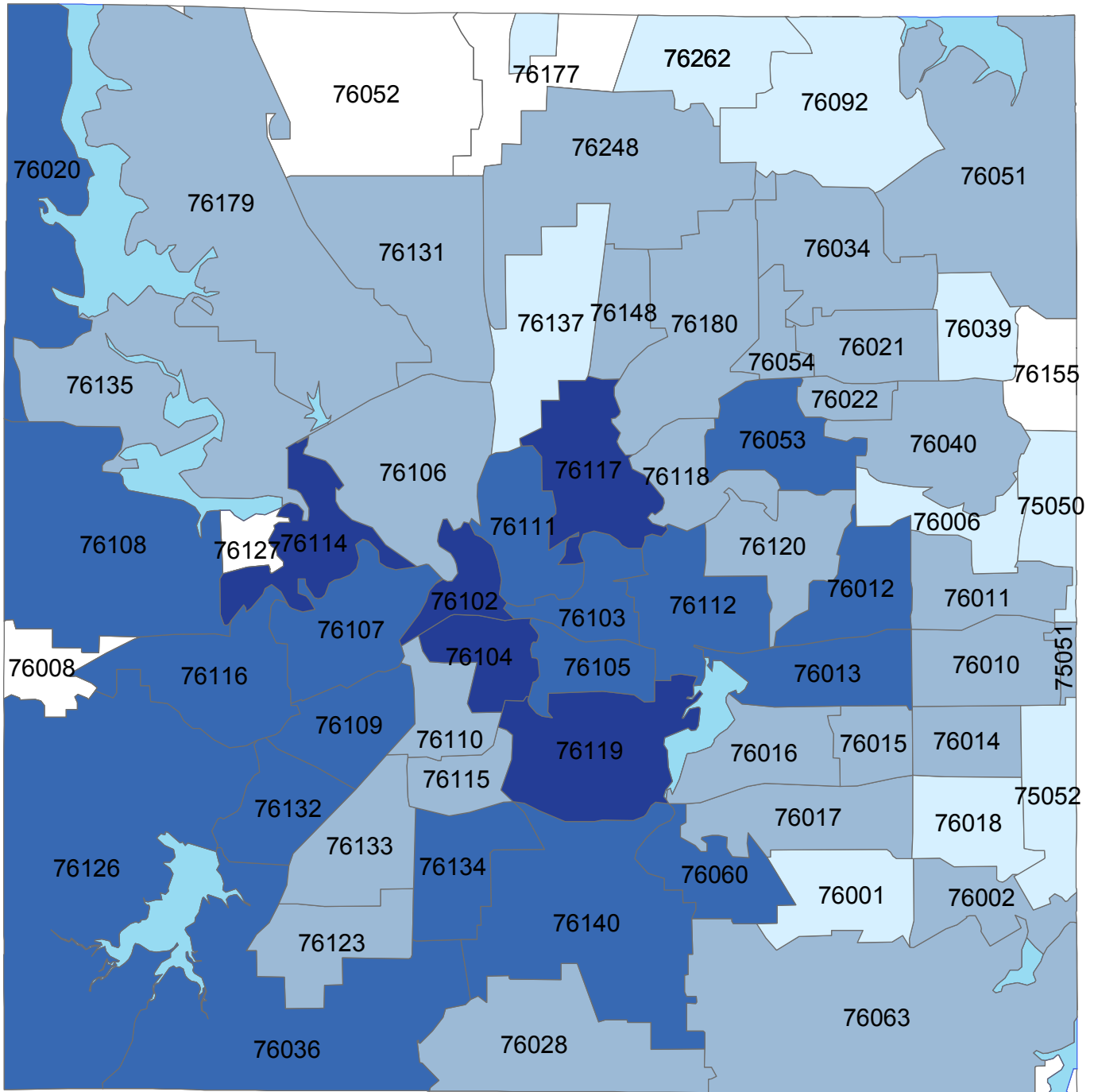
- | | | | |
|---|-----------------|---|---------|
|  | 52.19 - 121.72 |  | No Case |
|  | 121.73 - 243.44 |  | Water |
|  | 243.45 - 365.15 | | |
|  | 365.16 - 486.87 | | |



Figure 13: Crude Death Rate of Heart Disease in Tarrant County, 2003









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Source: Mortality Data from TDSHS

Legend

- | | | | |
|---|-----------------|---|---------|
|  | 28.78 - 92.74 |  | No Case |
|  | 92.75 - 185.48 |  | Water |
|  | 185.49 - 278.21 | | |
|  | 278.22 - 370.95 | | |



Malignant Neoplasms

Overall, there was a decline in the crude death rates of malignant neoplasm from 139 per 100,000 population in 2001 to 131.8 per 100,000 population in 2003 (Figure 14).

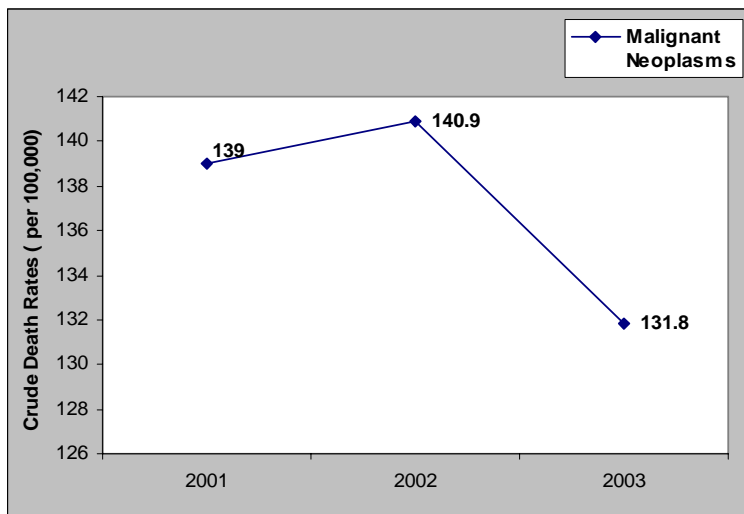


Figure 14: Crude Death Rate of Malignant Neoplasms, Tarrant County, 2001-2003

The rate increased, however from 2001 to 140.9 per 100,000 population in 2002 and declined from 2002 to 2003. When stratified further by race/ethnicity, the death rates for malignant neoplasm showed the same pattern as the overall crude death rate in Whites and in Hispanics. In Blacks and Others, however the death rates steadily declined from 2001 to 2003 (Figure 15).

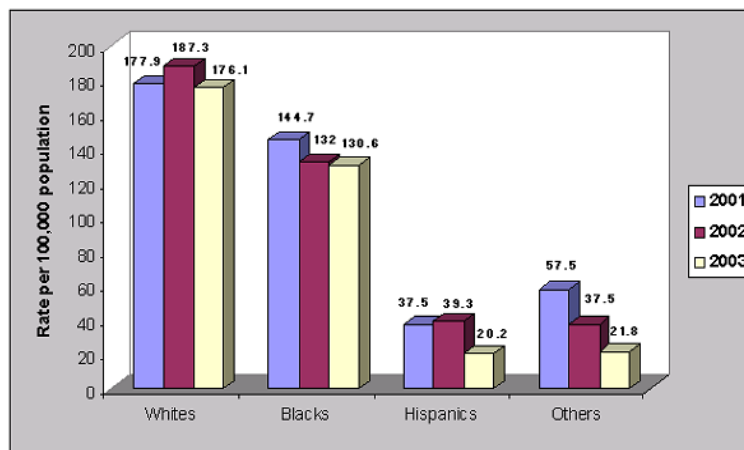


Figure 15: Mortality Rate of Malignant Neoplasms by Race/Ethnicity, Tarrant County, 2001-2003

In males, there was an increase in the crude death rates of malignant neoplasm from 2001 to 2002, and decline from 2002 to 2003. In females, however the death rate shows a steady decline. Overall, the death rates in both males and females show a decline from 2001 to 2003. Also, for every year (2001, 2002 and 2003), the death rates in males were consistently higher than the rates in females (Figure 16).

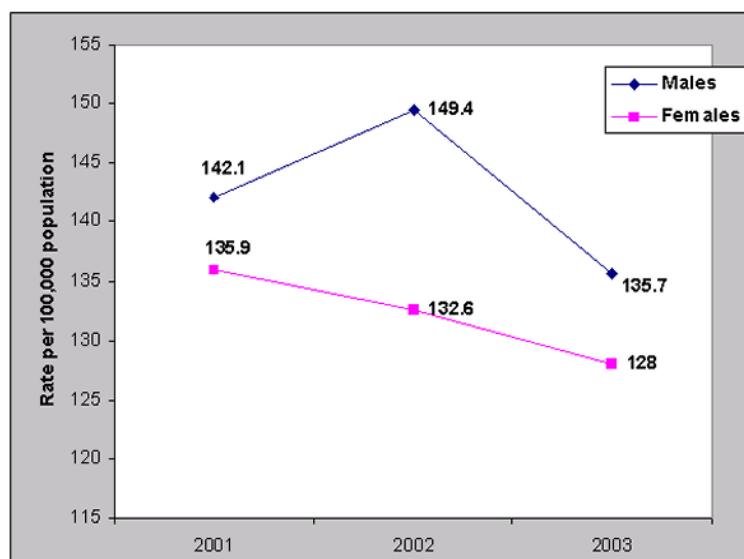
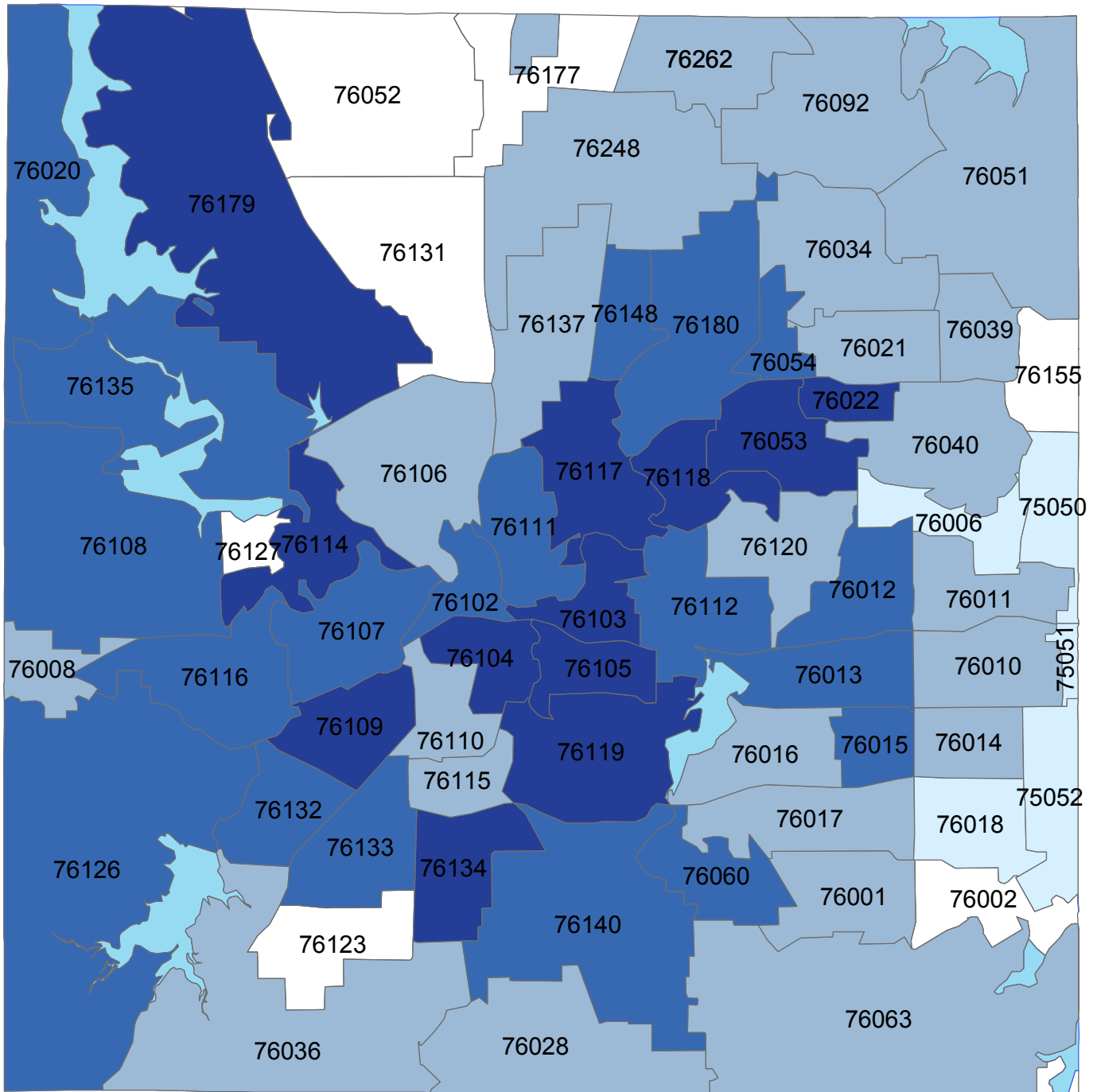


Figure 16: Mortality Rate of Malignant Neoplasms by Gender, Tarrant County, 2001-2003

Figure 17: Crude Death Rate of Malignant Neoplasms in Tarrant County, 2001



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Source: Mortality Data from TDSHS

Legend







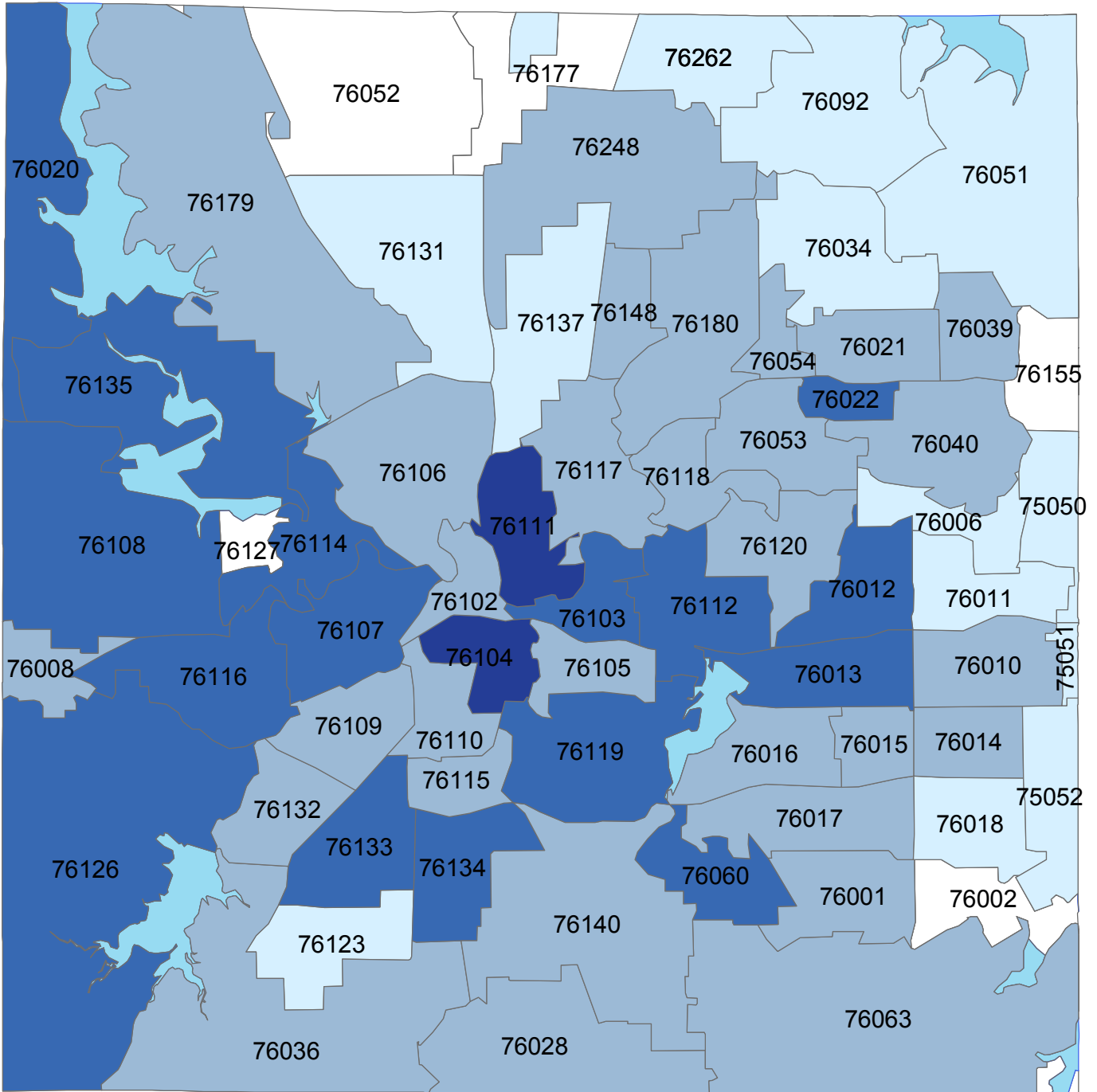
- | | | | |
|--|-----------------|---|---------|
|  | 41.11 - 68.11 |  | No Case |
|  | 68.12 - 136.21 |  | Water |
|  | 136.22 - 204.32 | | |
|  | 204.33 - 272.42 | | |



Figure 18: Crude Death Rate of Malignant Neoplasms in Tarrant County, 2002



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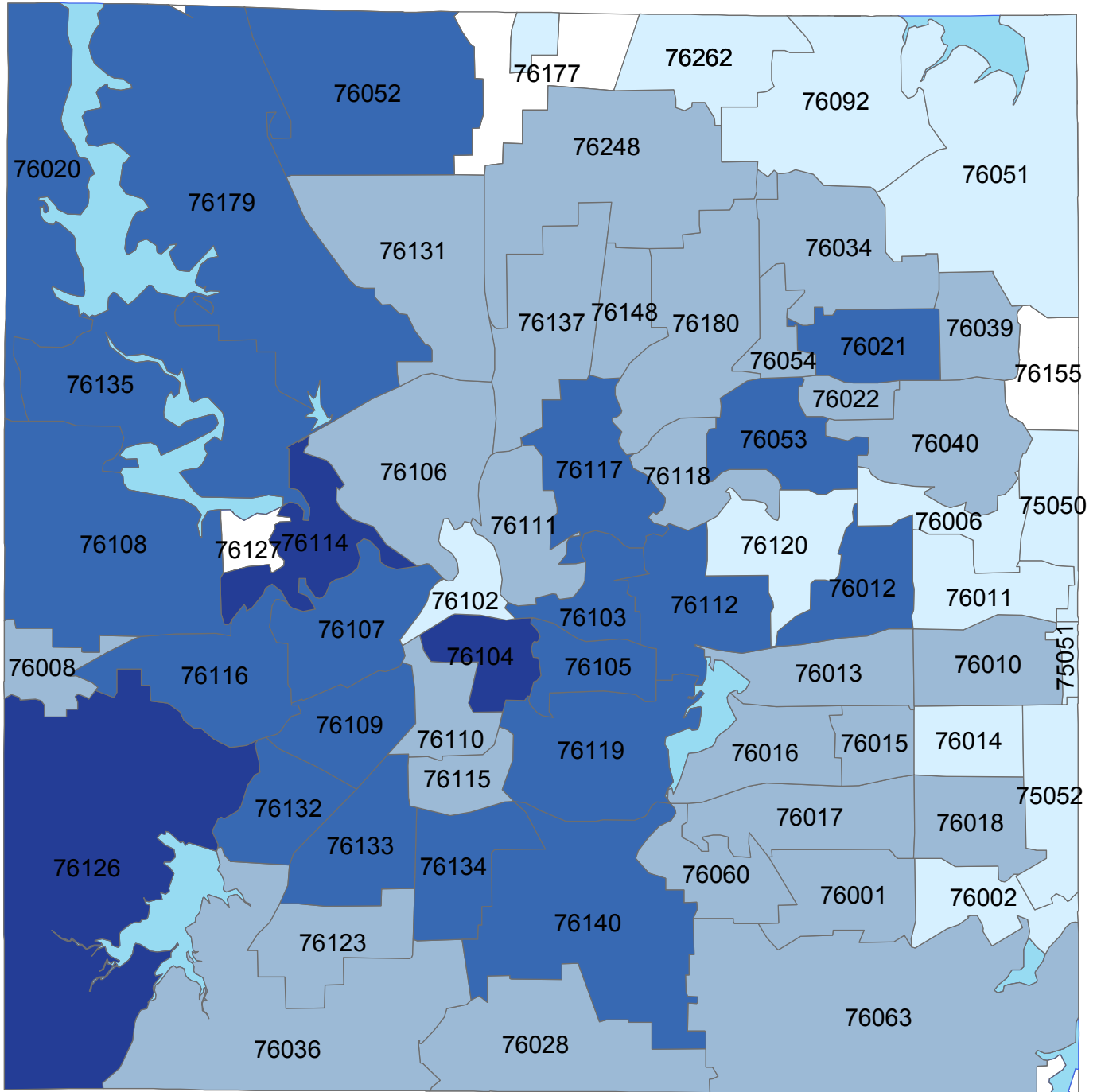
Source: Mortality Data from TDSHS

Legend

- 28.79 - 86.94
- 86.95 - 173.89
- 173.90 - 260.83
- 260.84 - 347.77
- No Case
- Water



Figure 19: Crude Death Rate of Malignant Neoplasms in Tarrant County, 2003



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Source: Mortality Data from TDSHS

Legend

- 28.46 - 75.35
- 75.36 - 150.70
- 150.71 - 226.05
- 226.06 - 301.40
- No Case
- Water



Cerebrovascular Diseases (Stroke)

There was a steady decline in the crude death rates of cerebrovascular diseases from 52.1 per 100,000 population in 2001 to 45 per 100,000 population in 2003 (Figure 20).

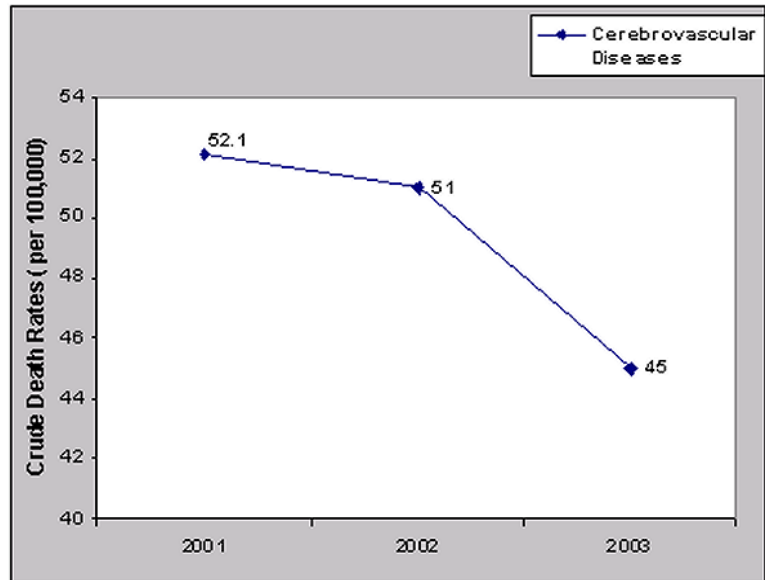


Figure 20: Crude Death Rate of Cerebrovascular Diseases, Tarrant County, 2001-2003

When stratified further by race/ethnicity, the death rates of cerebrovascular diseases shows a decline in Whites but an increase in Blacks, Hispanics and Others from 2001 to 2003 (Figure 21).

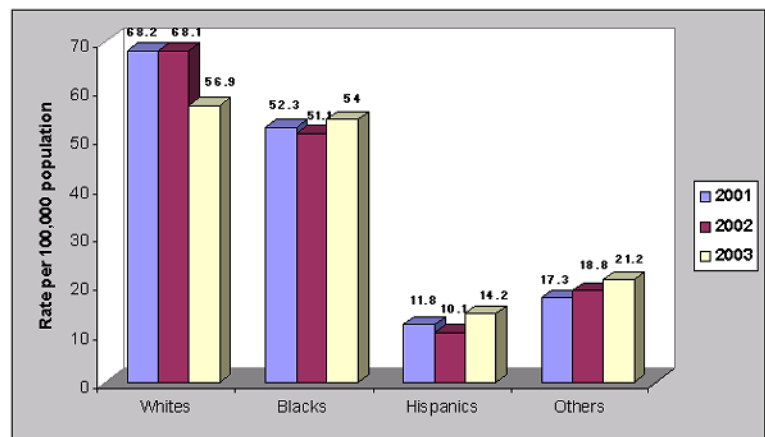


Figure 21: Mortality Rate of Cerebrovascular Disease by Race/Ethnicity, Tarrant County, 2001-2003

In both males and females, there was a decline in the crude death rates of cerebrovascular diseases from 2001 to 2003. Also, for every year (2001, 2002 and 2003), the death rates in males were consistently lower than the rates in females (Figure 22).

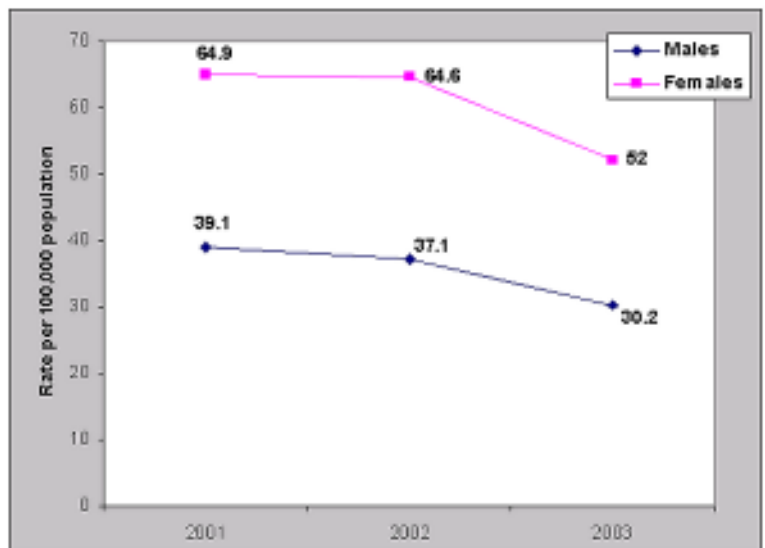
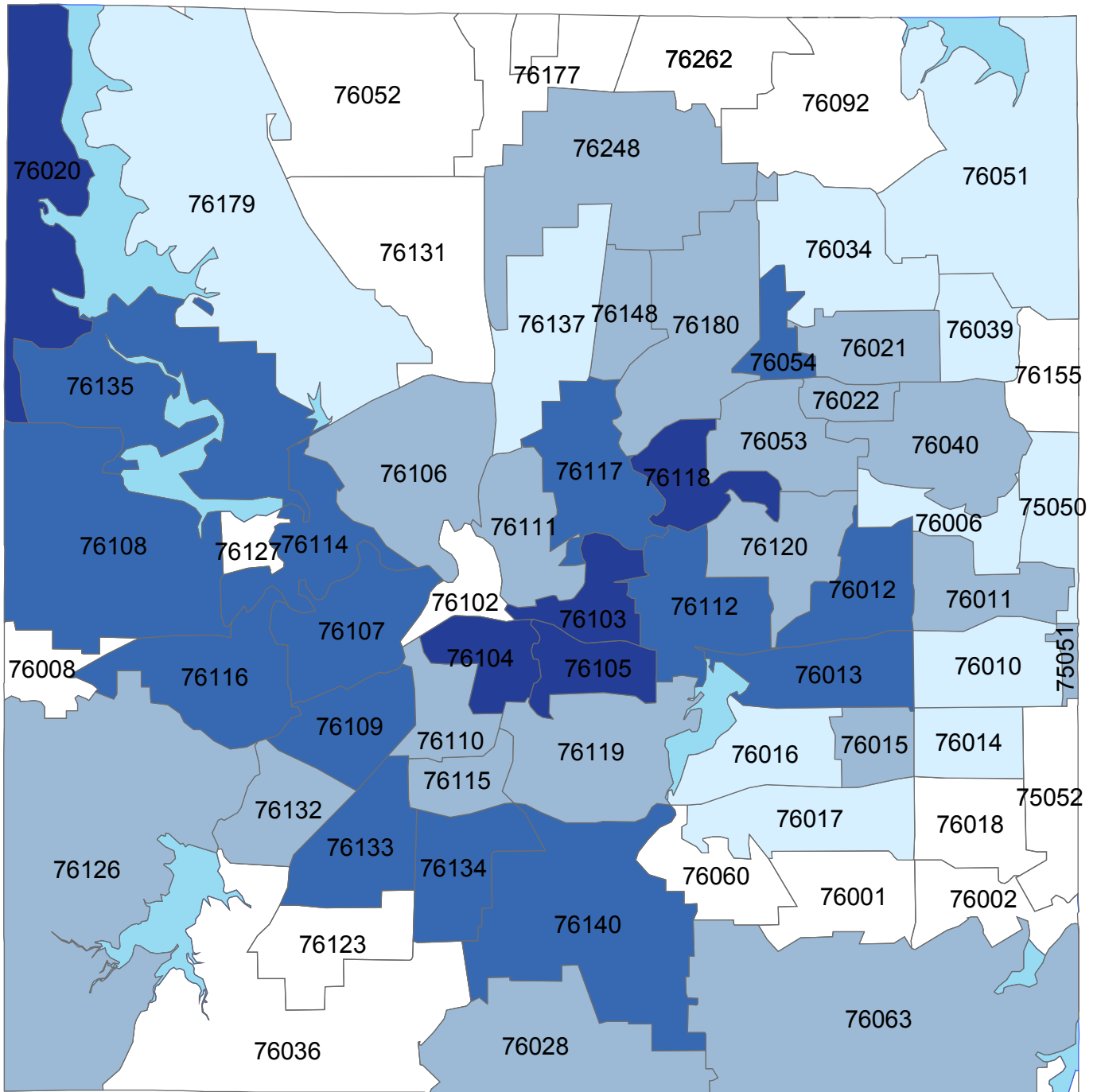


Figure 22: Mortality Rate of Cerebrovascular Diseases by Gender, Tarrant County, 2001-2003

Figure 23: Crude Death Rate of Cerebrovascular Disease in Tarrant County, 2001



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Source: Mortality Data from TDSHS

Legend







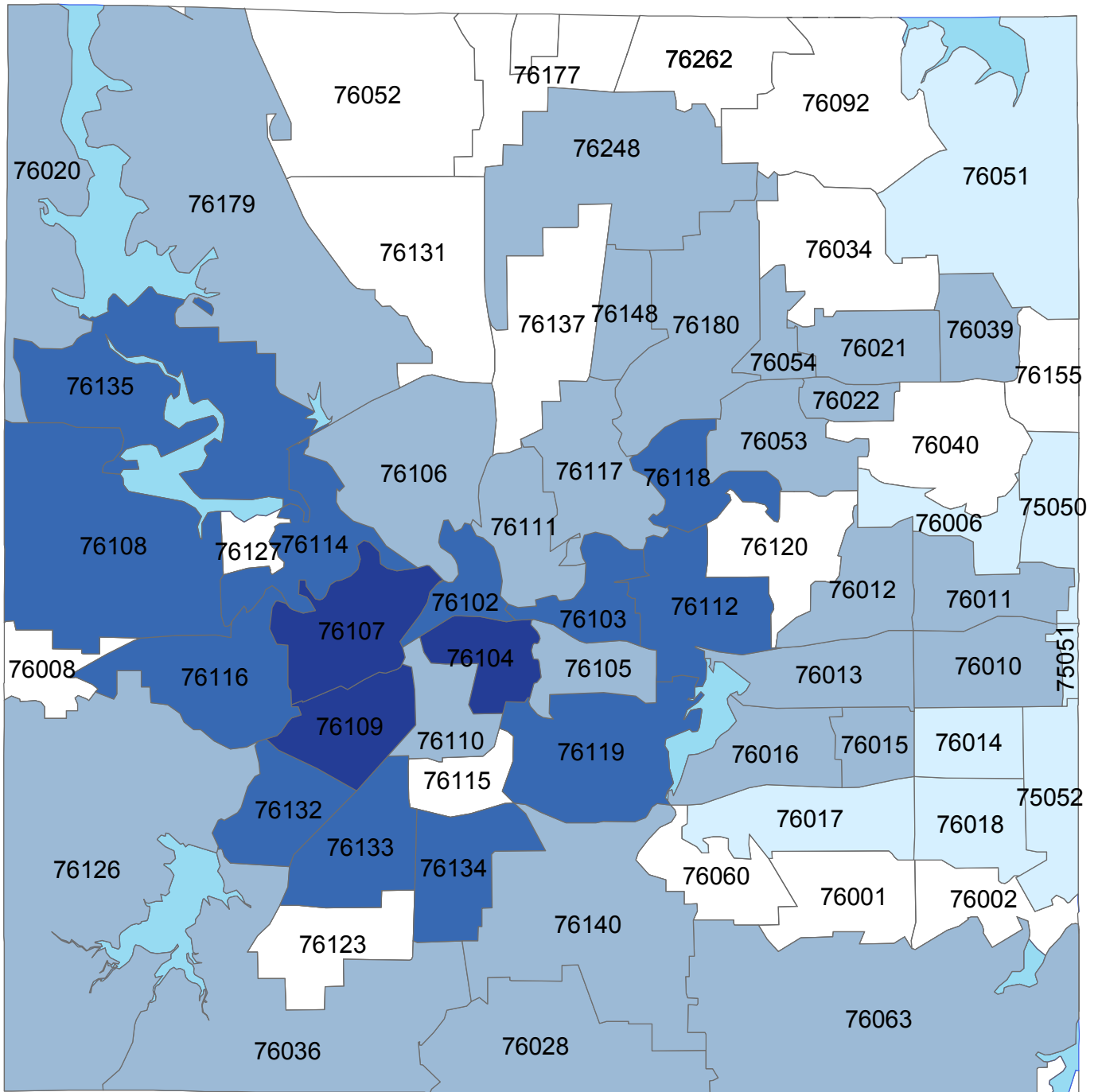
- | | | | |
|--|----------------|---|---------|
|  | 15.72 - 31.88 |  | No Case |
|  | 31.89 - 63.76 |  | Water |
|  | 63.77 - 95.63 | | |
|  | 95.64 - 127.51 | | |



Figure 24: Crude Death Rate of Cerebrovascular Disease in Tarrant County, 2002



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Source: Mortality Data from TDSHS

Legend







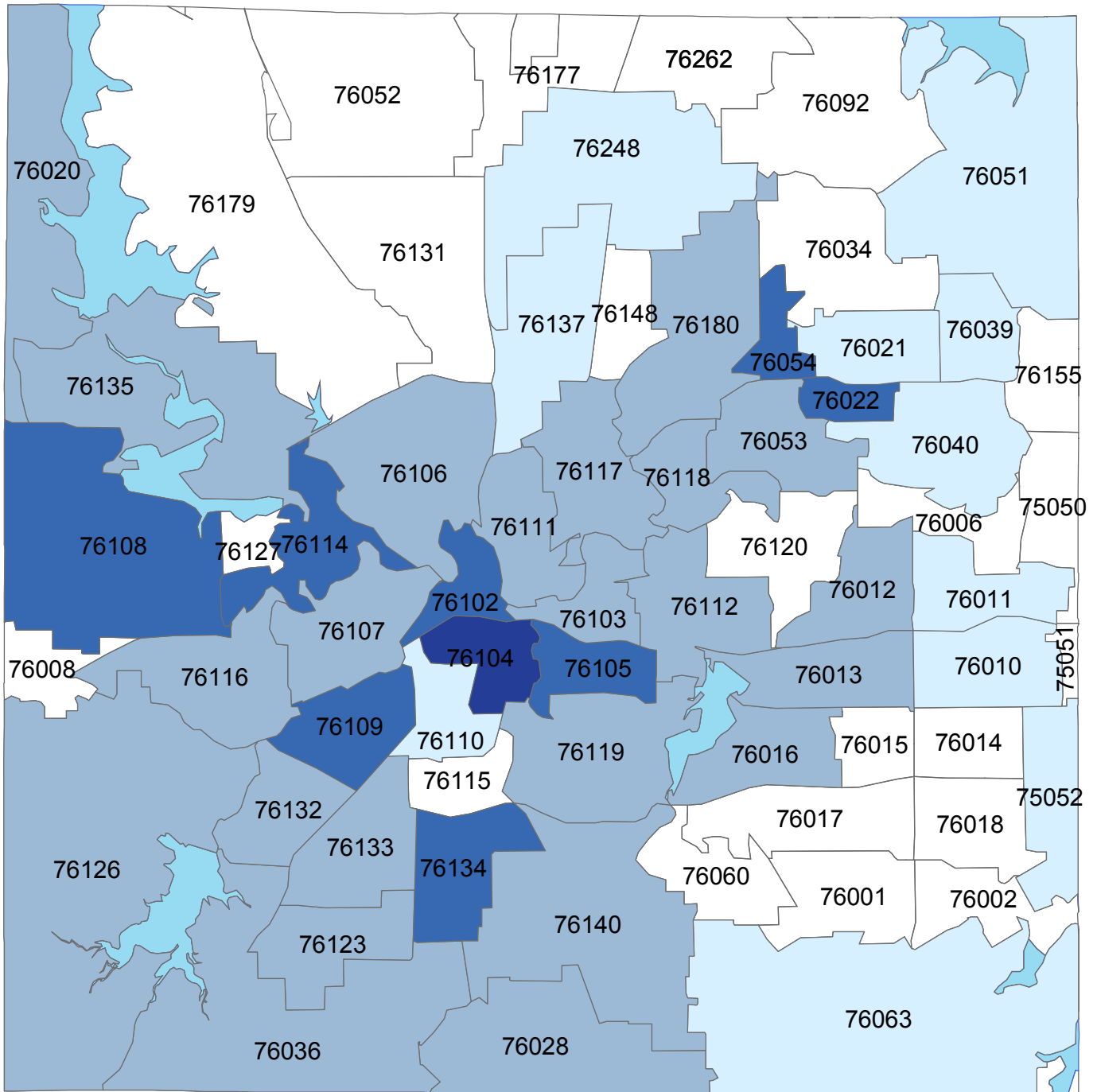
- | | | | |
|--|-----------------|---|---------|
|  | 12.45 - 34.78 |  | No Case |
|  | 34.79 - 69.56 |  | Water |
|  | 69.57 - 104.33 | | |
|  | 104.34 - 139.11 | | |



Figure 25: Crude Death Rate of Cerebrovascular Disease in Tarrant County, 2003









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Source: Mortality Data from TDSHS

Legend

- | | | | |
|--|-----------------|---|---------|
|  | 22.48 - 40.57 |  | No Case |
|  | 40.58 - 81.15 |  | Water |
|  | 81.16 - 121.72 | | |
|  | 121.73 - 162.29 | | |



Chronic Lower Respiratory Diseases

Overall, there was a decline in the crude death rates of chronic lower respiratory diseases from 33.9 per 100,000 population in 2001 to 30.9 per 100,000 population in 2003 (Figure 26).

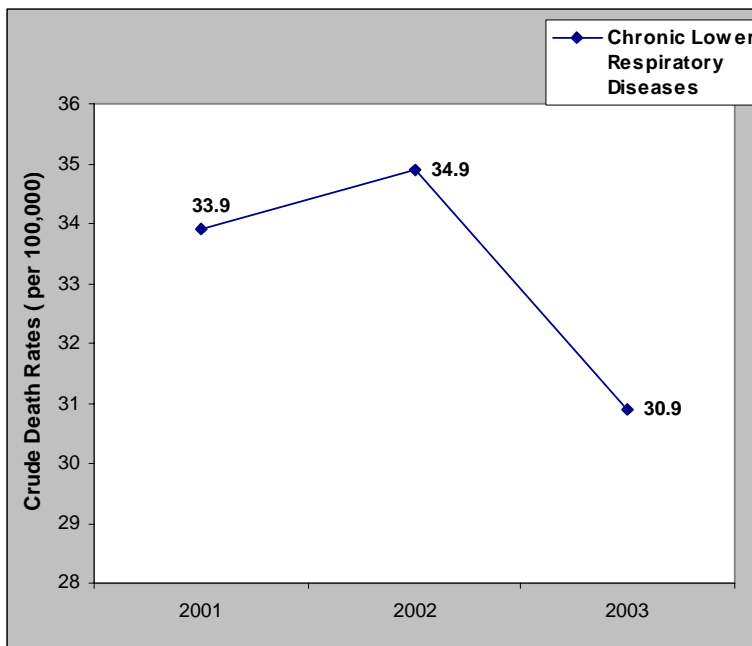


Figure 26: Crude Death Rate of Chronic Lower Respiratory Diseases, Tarrant County, 2001-2003

There was slight increase, however from 2001 to 34.9 per 100,000 population in 2002 and decrease from 2002 to 2003. When stratified by race/ethnicity, the death rates of chronic lower respiratory diseases showed the same pattern of decline in Whites, Blacks, Hispanics and Others from 2001 to 2003 (Figure 27).

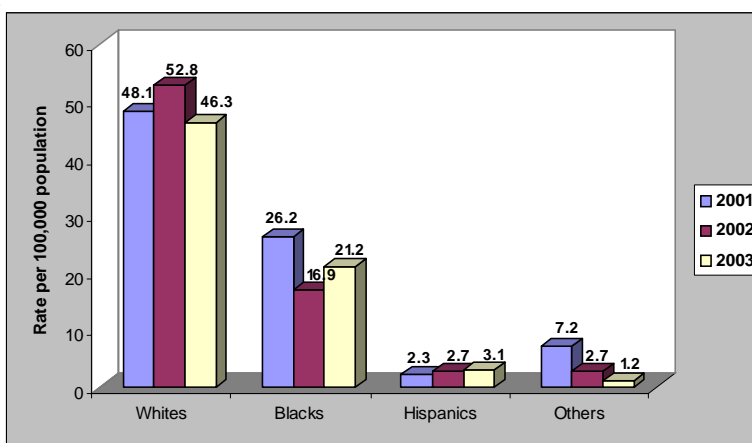


Figure 27: Mortality Rate of Chronic Lower Respiratory Diseases by Race/Ethnicity, Tarrant County, 2001-2003

In Whites, Blacks and in Hispanics, the rates increased from 2001 to 2002 and then declined from 2002 to 2003. In Others, the rates showed a steady decline from 2001 to 2003. In males, crude mortality rates for Chronic Lower Respiratory Diseases declined from 2001 to 2003, while in females, there was an increase from 2001 to 2002, followed by a decline from 2002 to 2003 (Figure 28).

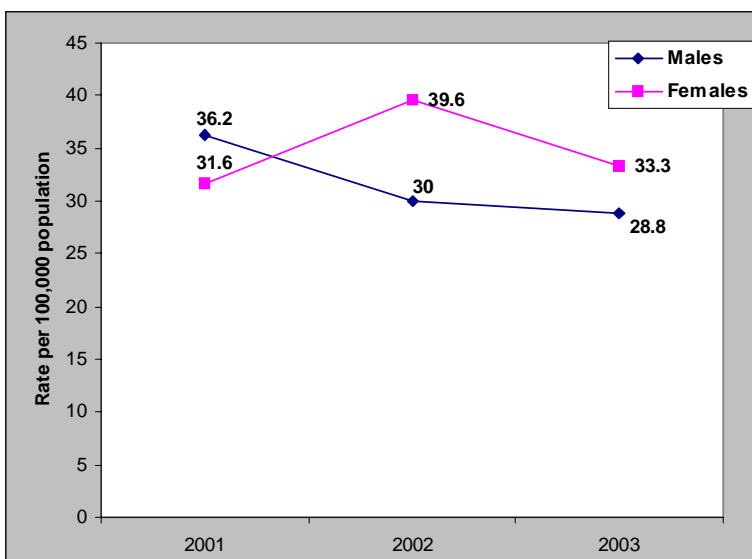


Figure 28: Mortality Rate of Chronic Lower Respiratory Diseases by Gender, Tarrant County, 2001-2003

Accidents

Overall, there was a slight decline in the crude death rates for accidents from 30 per 100,000 population in 2001 to 29.1 per 100,000 population in 2003 (Figure 29).

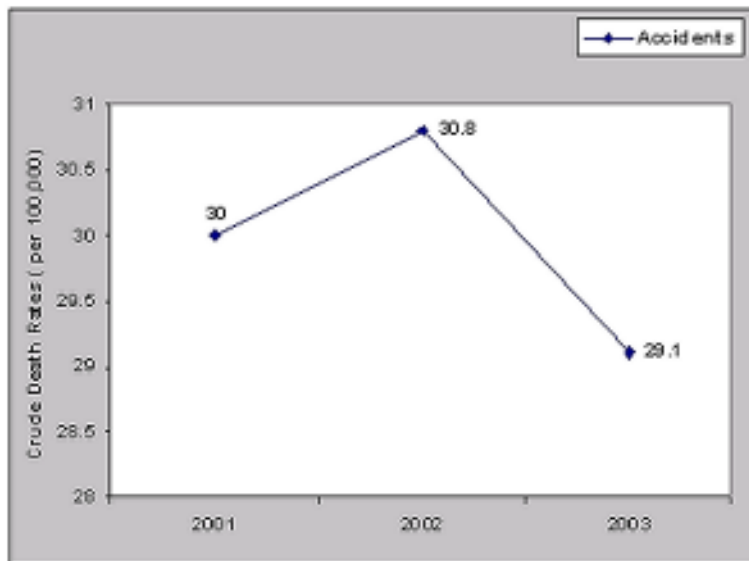


Figure 29: Crude Death Rate of Accidents, Tarrant County, 2001-2003

Initially the rates increased slightly from 2001 to 2002 and then declined slightly from 2002 to 2003. When stratified by race/ethnicity, the death rates of accidents showed an overall increase for Whites and Others from 2001 to 2003 and an overall decrease for Blacks and Hispanics. There was a steady decline from 2001 to 2003 for Blacks. There was a notable increase in death rates from accidents among Others from 2001 to 2003 (Figure 30).

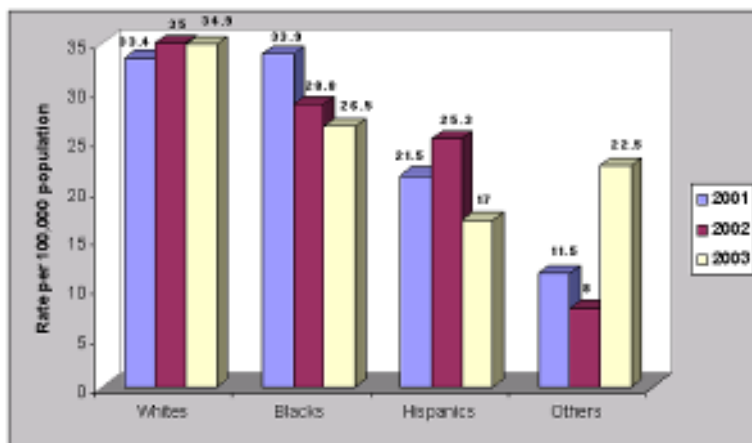


Figure 30: Mortality Rate of Accidents by Race/Ethnicity, Tarrant County, 2001-2003

The death rates in males showed a slight decline from 2001 to 2003, but no noteworthy variation in females. Also, the death rates in males were consistently higher than that of females in the three years (2001, 2002 and 2003) (Figure 31).

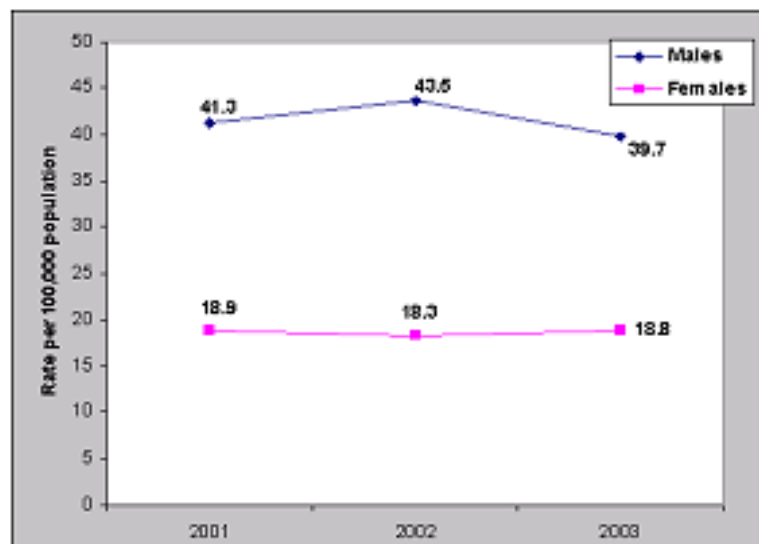


Figure 31: Mortality Rate of Accidents by Gender, Tarrant County, 2001-2003

Diabetes Mellitus

Overall, there was a slight decline in the crude death rates for diabetes mellitus from 20.2 per 100,000 population in 2001 to 19.4 per 100,000 population in 2003 (Figure 32).

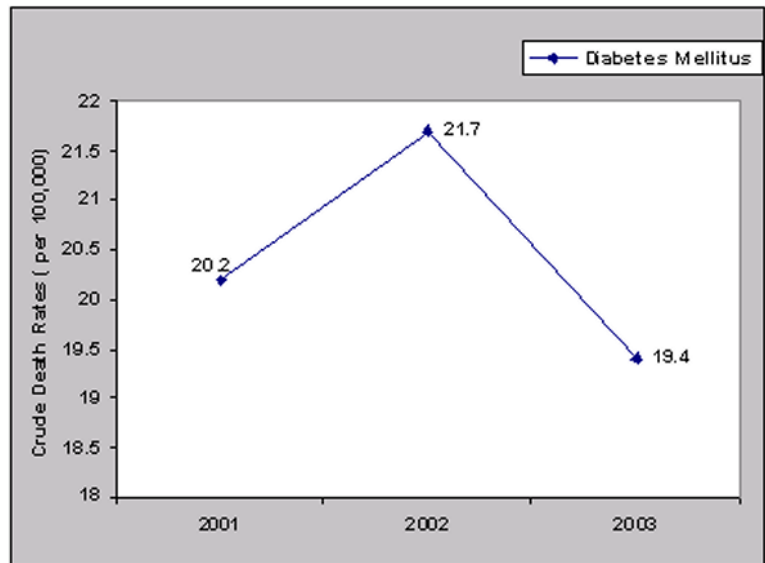


Figure 32: Crude Death Rate of Diabetes Mellitus, Tarrant County, 2001-2003

The rates increased slightly from 2001 to 2002 and from 2002 to 2003, there was a slight decline. When stratified by race/ethnicity, the death rates of diabetes mellitus showed the same pattern for Whites, Blacks, and Others. For Hispanics however, the death rates decreased from 2001 to 2002 and increased from 2002 to 2003. Overall, the death rates of diabetes mellitus declined from 2001 to 2003 in Whites and Blacks; remained the same in Hispanics and increased in Others (Figure 33).

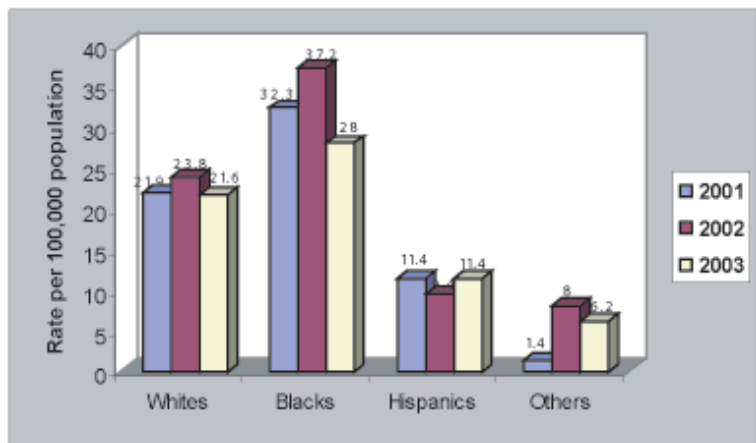


Figure 33: Mortality Rate of Diabetes Mellitus by Race/Ethnicity, Tarrant County, 2001-2003

The death rates in males remained the same at 18.2 per 100,000 population from 2001 to 2003, but there was a slight decline for females from 22.1 per 100,000 population to 20.5 per 100,000 population (Figure 34).

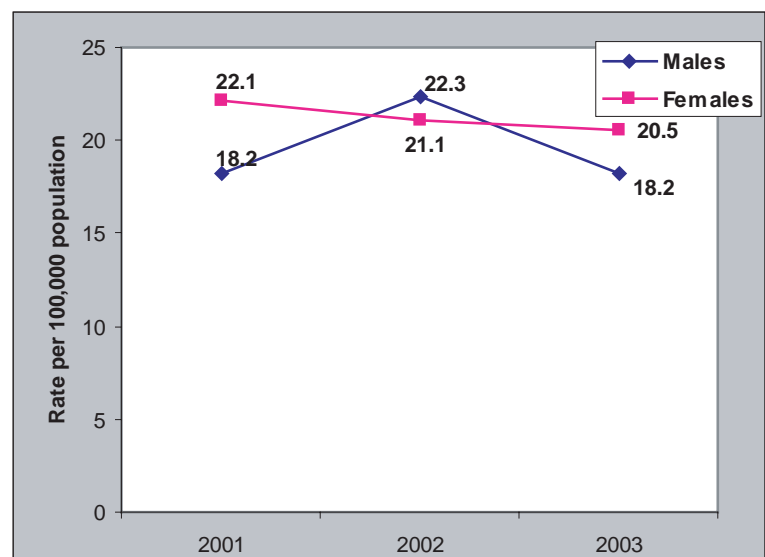


Figure 34: Mortality Rate of Diabetes Mellitus by Gender, Tarrant County, 2001-2003

Alzheimer's Disease

There was a decline in the crude death rate for Alzheimer's disease from 17.6 per 100,000 population in 2001 to 16.5 per 100,000 population in 2003 (Figure 35).

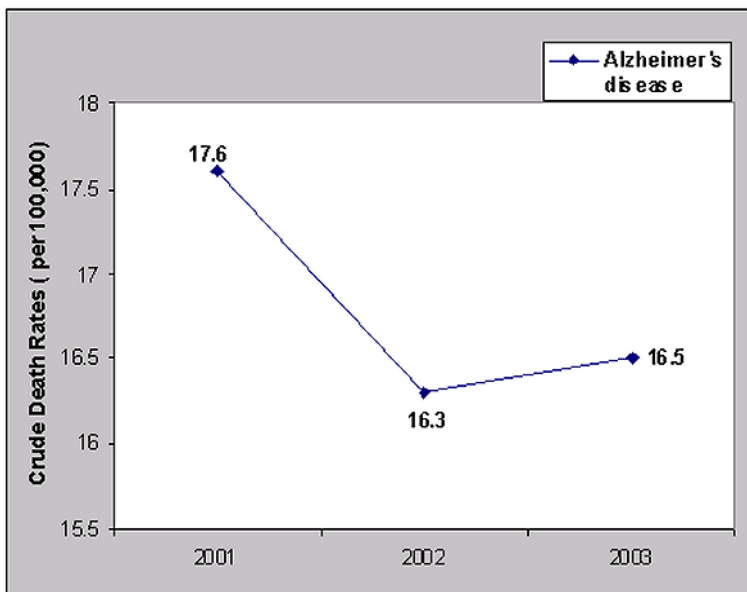


Figure 35: Crude Death Rate of Alzheimer's disease, Tarrant County, 2001-2003

When stratified by race/ethnicity, the death rate of Alzheimer's disease showed a slight decline in Whites from 2001 to 2003 and an increase in Blacks, Hispanics and Others for the same period (Figure 36).

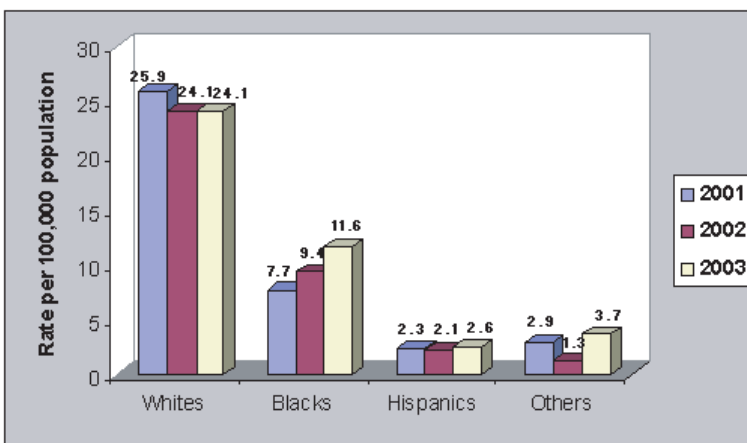


Figure 36: Mortality Rate of Alzheimer's disease by Race/Ethnicity, Tarrant County, 2001-2003

It should be noted that in Blacks, the rates increased steadily from 2001 to 2003 and in Hispanics and Others, the rates decreased from 2001 to 2002 and then increased from 2002 to 2003. In females, there was a decline in the death rates of Alzheimer's disease from 2001 to 2003, but in males there was no noteworthy variation in the death rate of Alzheimer's disease from 2001 to 2003. The death rates in males were consistently lower than the rates in females in all the three years (2001, 2002 and 2003) (Figure 37).

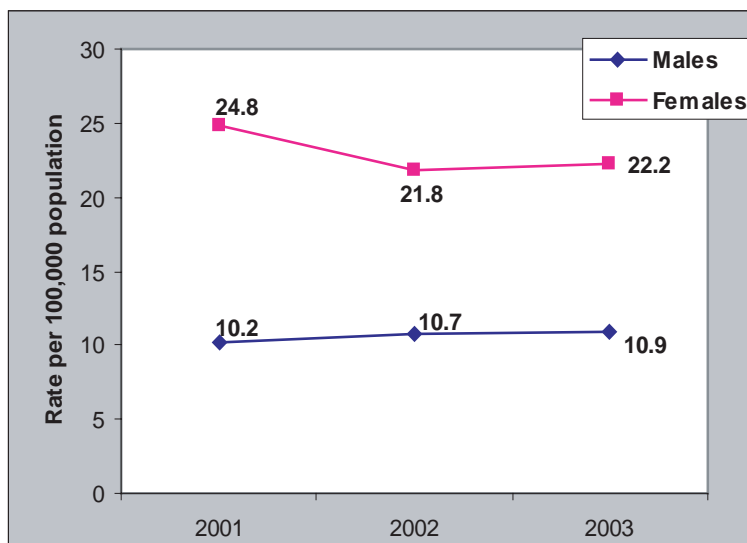




Figure 37: Mortality Rate Of Alzheimer's Disease By Gender, Tarrant County, 2001-2003

LIMITATIONS¹

Ranking causes of death is to some extent an arbitrary procedure and there are numerous inherent limitations to adopting this method. When comparing rankings across groups or over time, one should be mindful of the age distribution of the populations being compared. Leading causes of death for populations with younger age distributions will tend to show higher rankings for causes of death that are prevalent among the young, such as homicide, unintentional injuries, and HIV infection. Leading causes for older populations will tend to show higher rankings for causes that are more prevalent among the elderly, such as Alzheimer's disease, heart diseases, cancer and cerebrovascular diseases. Hence the results presented in this report should be interpreted with caution because age adjusted death rates were not presented.

Consideration should also be given to the effects of random variation on cause-of-death rankings. When the number of events is small (perhaps less than 100 deaths), estimates of mortality rates are subject to random fluctuations. Also when comparing rankings based on small numbers of deaths between groups or over time, it is important to be aware that differences in relative rankings may be attributable to random variability or as seen in this report, there may be more than one cause of death placed at a particular position.

DATA SOURCES

-  Texas Department of State Health Services, Department of Vital Statistics
-  Population estimates
 - U.S. Census 2000
 - Texas Department of State Health Services
(<http://soupfin.tdh.state.tx.us/people.htm>, last accessed Sept. 10, 2005)

ACKNOWLEDGEMENTS

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¹Text modified from Anderson RN, Smith BL. Deaths: Leading causes for 2002. National Vital Statistics reports; vol 53 no 17. pg. 3-7, Hyattsville, Maryland: National Center for Health Statistics. 2005.

Leading Causes of Death in Tarrant County
2001 - 2003



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