Alzheimer's Disease

Heart Diseases

Diabetes

Leading Causes of

in Tarrant County

Malignant Neoplasms

Cerebrovascular Diseases

2005

Accidents

Chronic Lower Respiratory Diseases

Tarrant County Public Health

Safeguarding our community's health

Leading Causes of Death
Tarrant County, 2005

Tarrant County
Public Health

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Suggested Citation
Leading Causes of Death, Tarrant County, 2005. Tarrant County Public Health, 2008

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ABSTRACT

OBJECTIVES

This report presents data on the leading causes of death in Tarrant County by gender, race/ethnicity, and geographic distribution of the death rate at the sub-county level for the year 2005.

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 year 2005. Population values used to construct the age-adjusted death 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 leading causes of death were then further analyzed by gender, race/ethnicity, and ZIP code distribution. Due to small sample sizes in age group categories, the leading causes of death were not analyzed by age group.

NOTABLE FINDINGS

- Approximately 9,860 deaths were documented in 2005 in Tarrant County with an age-adjusted death rate of 850.7 deaths per 100,000 population.

- In 2005, the leading causes of death in Tarrant County were, in rank order:
  - Diseases of the heart
  - Malignant neoplasms (cancer)
  - Cerebrovascular disease (stroke)
  - Chronic lower respiratory disease
  - Accidents (unintentional injuries)
  - Diabetes mellitus
  - Alzheimer's disease
  - Intentional self-harm (suicide)
  - Influenza and pneumonia
  - Chronic liver disease and cirrhosis
  - Nephritis, nephritic syndrome, and nephrosis
  - Septicemia

- The aforementioned leading causes of death accounted for 79 percent of all deaths occurring in Tarrant County during the year 2005.

- Across all gender and race/ethnic groups, diseases of the heart and malignant neoplasms ranked among the top two leading causes of death.

[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

INTRODUCTION[1]

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; causes with the highest frequency counts 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 the final 2005 data on leading causes of death in Tarrant County by gender, race/ethnicity, age, and geographic distribution 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 detailed information about HIV/AIDS can be found in *HIV and AIDS in Tarrant County*, a Tarrant County Public Health quarterly newsletter.

PROCEDURES FOR RANKING CAUSES OF DEATH

The procedures used for ranking causes of death in Tarrant County are consistent with procedures utilized by the 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. Technically crude death rates could be used as ranking criteria since the population denominator of the rate is constant across all cause-of-death categories. However, these rates are less than ideal due to the fact that crude death rates are typically expressed per 100,000 population and are often rounded to the one decimal place, thus reducing the precision of the ranking criteria. This issue is especially problematic when ranking causes of death for small population subgroups or geographic areas as the rounding may make differentiating the ranks for several causes impossible. Age-adjusted death rates are not an appropriate tool for ranking causes of death since these rates are dependent upon the age distribution of the population used in standardizing the rate. Although the number of deaths was used to determine the rankings of causes of death in Tarrant County, the age-adjusted death rates were used for analysis of trends in causes of death.

Developed for use with ICD-10, the "List of 113 selected causes of death" 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 gender, race/ethnicity, age, and geographic distribution at the ZIP code level. GIS was used in mapping rates at the ZIP code level.

[1]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

RESULTS

During the year 2005, approximately 9,860 deaths were reported in Tarrant County, yielding an age-adjusted death rate of 850.7 deaths per 100,000 population. Although the number of deaths among male and female residents of Tarrant County is similar, the age-adjusted death rate among males is 30 percent higher than that of females (Table1).

Table 1. Population Death Rates by Gender, Tarrant County, 2005

	Deaths (n)	Percent	Age-Adjusted Rate
Male	4916	49.9	972.0
Female	4943	50.1	750.8
Total	9859	100.0	850.7

Rates adjusted using the 2000 standard population
Rate per 100,000 population
Data Source: Texas Department of State Health Services, Center for Vital Statistics

Although Whites experienced a higher number of total deaths during the year 2005, the age-adjusted death rates of Blacks was twice that of Others, seventy percent greater than that of Hispanics, and approximately thirty percent higher than the age-adjusted death rate among Whites (Table 2). These differences between the total number of deaths and resultant age-adjusted mortality rates could be attributed to the fact that White populations in Tarrant County tend to be larger in number with a potentially larger portion of the population falling into older age categories than the ethnic minority populations in the county.

Table 2. Population Death Rates by Race/Ethnicity, Tarrant County, 2005

	Deaths (n)	Percent	Age-Adjusted Rate
White	7537	76.4	861.7
Black	1372	13.9	1,083.5
Hispanic	776	7.9	613.4
Other	174	1.8	371.2
Total	9859	100.0	850.7

Rates adjusted using the 2000 standard population
Rate per 100,000 population
Data Source: Texas Department of State Health Services, Center for Vital Statistics

Increases in age group category were typically associated with both a greater number of total deaths and a higher age-adjusted death rate. However, this trend differed among individuals aged less than 1 year whose total number of deaths ranked seventh among age groups and whose age-adjusted mortality rate ranked sixth among age groups (Table 3). A more detailed analysis of mortality rates among this age group can be found in the *Tarrant County Infant Mortality Report*.

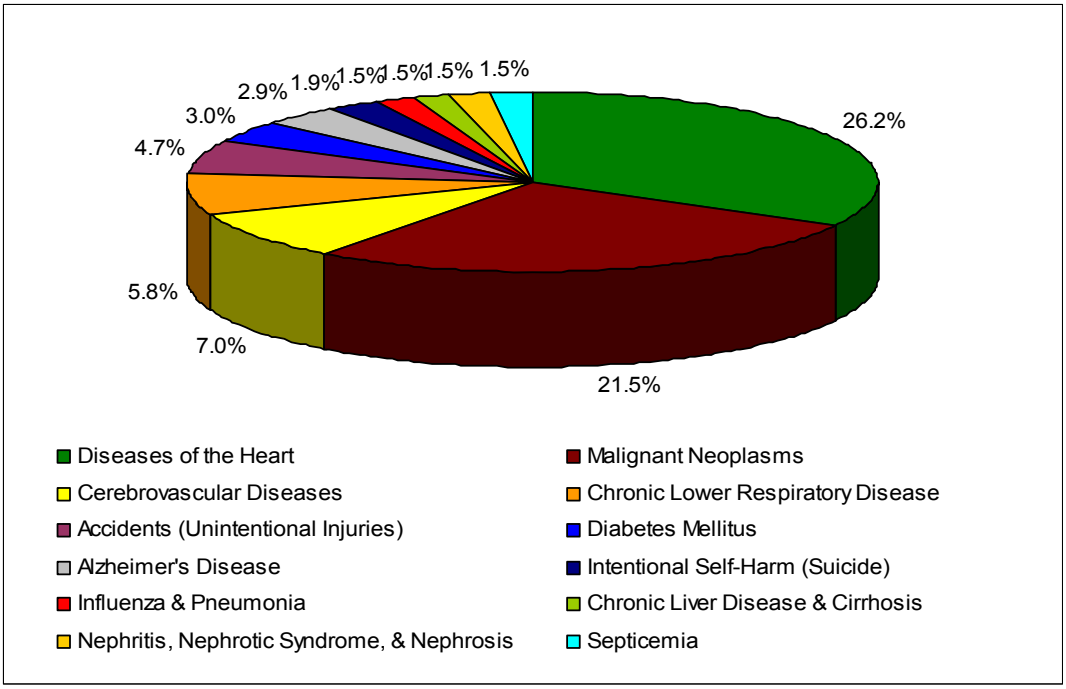
Table 3. Population Death Rates by Age Group, Tarrant County, 2005

	Deaths (n)	Percent	Age-Adjusted Rate
Less than 1 yr	229	2.3	847.8
1-4 yrs	29	0.3	27.7
5-14 yrs	35	0.4	14.6
15-24 yrs	167	1.7	72.4
25-34 yrs	248	2.5	96.1
35-44 yrs	440	4.5	174.5
45-54 yrs	908	9.2	413.9
55-64 yrs	1263	12.8	903.7
65-74 yrs	1628	16.5	2272.9
75+ yrs	4912	49.8	8271.0
Total	9859	100.0	850.7

Rates adjusted using the 2000 standard population
Rate per 100,000 population
Data Source: Texas Department of State Health Services, Center for Vital Statistics

Of the 50 possible rankable causes of death (NCHS), deaths in Tarrant County during the year 2005 fell into 39 of these classifications (Tables 4a and 4b). Within these categories, the leading causes of death discussed in this report accounted for approximately 79 percent of all deaths in Tarrant County during 2005. Additionally, diseases of the heart and malignant neoplasms (cancer), the top two overall leading causes of death, accounted for almost half of all Tarrant County deaths during this time period (Figure 1).

Figure 1. Leading Causes of Death, Tarrant County, 2005



Data Source: Texas Department of State Health Services, Center for Vital Statistics

Table 4a. Rankable Causes of Death, Tarrant County, 2005

Condition	ICD 10 Code	Count
Accidents (Unintentional Harm)	V01-X59, Y85-Y86	463
Acute Bronchitis & Bronchiolitis	J20-J21	<5
Acute Poliomyelitis	A80	0
Alzheimer's Disease	G30	288
Anemias	D50-D64	9
Aortic Aneurysm & Dissection	I71	53
Arthropod-borne Viral Encephalitis	A83-A84, A85.2	0
Assault (Homicide)	X85-Y09, Y87.1	97
Atherosclerosis	I70	44
Cerebrovascular Disease	I60-I69	688
Certain Conditions Originating in the Perinatal Period	P00-P96	118
Cholelithiasis & Other Disorders of the Gallbladder	K80-K82	12
Chronic Liver Disease & Cirrhosis	K70, K73-K74	146
Chronic Lower Respiratory Diseases	J40-J47	567
Complications of Medical & Surgical Care	Y40-Y84, Y88	10
Congenital Malformations, Deformations, & Chromosomal Abnormalities	Q00-Q99	58
Diabetes Mellitus	E10-E14	297
Diseases of Appendix	K35-K38	<5
Diseases of Heart	I00-I09, I11, I13, I20-I51	2581
Essential (Primary) Hypertension & Hypertensive Renal Disease	I10, I12	101
Hernia	K40-K46	9
Human Immunodeficiency Virus (HIV) Disease	B20-B24	72
Hyperplasia of Prostate	N40	0

Data Source: Texas Department of State Health Services, Center for Vital Statistics

Table 4b. Rankable Causes of Death, Tarrant County, 2005

Condition	ICD 10 Code	Count
In Situ Neoplasms, Benign Neoplasms, & Neoplasms of Uncertain or Unknown Behavior	D00-D48	41
Infections of Kidney	N10-N12, N13.6, N15.1	<5
Inflammatory Diseases of Female Pelvic Organs	N70-N76	<5
Influenza & Pneumonia	J10-J18	150
Intentional Self-Harm (Suicide)	X60-X84, Y87.0	189
Legal Intervention	Y35, Y89.0	<5
Malaria	B50-B54	0
Malignant Neoplasms	C00-C97	2119
Measles	B05	0
Meningitis	G00, G03	<5
Meningococcal Infection	A39	<5
Nephritis, Nephrotic Syndrome, & Nephrosis	N00-N07, N17-N19, N25-N27	146
Nutritional Deficiencies	E40-E64	19
Operations of War & their Sequelae	Y36, Y89.1	0
Parkinson's Disease	G20-G21	93
Peptic Ulcer	K25-K28	12
Pneumoconioses & Chemical Effects	J60-J66, J68	0
Pneumonitis due to Solids & Liquids	J69	55
Pregnancy, Childbirth, & the Puerperium	O00-O99	<5
Salmonella Infections	A01-A02	0
Scarlet Fever & Erysipelas	A38, A46	0
Septicemia	A40-A41	146
Shigellosis & Amebiasis	A03, A06	0
Syphilis	A50-A53	0
Tuberculosis	A16-A19	6
Viral Hepatitis	B15-B19	33
Whooping Cough	A37	<5

Data Source: Texas Department of State Health Services, Center for Vital Statistics

GENDER DIFFERENCES

Diseases of the heart and malignant neoplasms ranked first and second, respectively, as leading causes of death among both males and females. Accidents ranked third in males but sixth in females while cerebrovascular disease ranked fourth in males and third in females. Chronic lower respiratory disease ranked forth in females and fifth among males. Diabetes ranked sixth in males and seventh in females while nephritis, nephrotic syndromes, and nephrosis ranked ninth in females and eleventh in males. Septicemia ranked tenth in both males and females. Intentional self-harm (suicide), chronic liver disease and cirrhosis, and assault ranked seventh, eighth and twelfth, respectively, among males but failed to be ranked among females. Likewise, influenza and pneumonia, essential hypertension and hypertensive renal disease, and conditions originating in the perinatal period ranked eighth, eleventh, and twelfth, respectively, among females but failed to be ranked in the top leading causes of death among males (Table 5).

Table 5. Leading Causes of Death by Gender, Tarrant County, 2005

	Overall n (% , Rate)	Male n (% , Rate)	Female n (% , Rate)
1	Diseases of the Heart 2,581 (26.2, 233.1)	Diseases of the Heart 1,314 (26.7, 274.9)	Diseases of the Heart 1,267 (25.6, 198.2)
2	Malignant Neoplasms 2,119 (21.5, 180.5)	Malignant Neoplasms 1,066 (21.7, 216.7)	Malignant Neoplasms 1,053 (21.3, 157.0)
3	Cerebrovascular Dis. 688 (7.0, 64.7)	Accidents 302 (6.1, 40.8)	Cerebrovascular Dis. 414 (8.4, 65.3)
4	Chr. Lower Resp. Dis. 567 (5.8, 52.7)	Cerebrovascular Dis. 274 (5.6, 61.9)	Chr. Lower Resp. Dis. 317 (6.4, 50.0)
5	Accidents 463 (4.7, 31.7)	Chr. Lower Resp. Dis. 250 (5.1, 58.0)	Alzheimer's Disease 206 (4.2, 33.1)
6	Diabetes Mellitus 297 (3.0, 25.0)	Diabetes Mellitus 164 (3.3, 31.6)	Accidents 161 (3.3, 22.2)
7	Alzheimer's Disease 288 (2.9, 28.8)	Intentional Self-Harm 147 (3.0, 19.7)	Diabetes Mellitus 133 (2.7, 19.9)
8	Intentional Self-Harm 189 (1.9, 12.0)	Chr. Liver Dis. & Cir 96 (2.0, 13.7)	Influenza & Pneum. 86 (1.7, 13.4)
9	Influenza & Pneum. 150 (1.5, 13.9)	Alzheimer's Disease 82 (1.7, 21.7)	Nephritis, etc. 75 (1.5, 11.5)
10	Chr. Liver Dis. & Cir. / Nephritis, etc. / Septicemia 146 (1.5, 10.2 / 13.4 / 12.9)	Septicemia 75 (1.5, 15.6)	Septicemia 71 (1.4, 10.9)
11		Nephritis, etc. 71 (1.4, 15.7)	Hypertension, *etc*. 63 (1.3, 10.1)
12		Assault 70 (1.4, 8.2)	Con. of Perinatal Per. 56 (1.1, 5.8)

Percent of total deaths attributed to specific cause
Rates adjusted using the 2000 standard population; rate per 100,000 population
Data Source: Texas Department of State Health Services, Center for Vital Statistics

RACE / ETHNICITY DIFFERENCES

For all race/ethnicity groups except Others, diseases of the heart and malignant neoplasms (cancer) ranked first and second, respectively, among leading causes of death; their positions were inverted in rank among Others. Additionally, cerebrovascular disease ranked third among all race/ethnicity groups except Hispanics where it ranked fourth. The highest ranking for chronic lower respiratory disease was among Whites (fourth place), while it ranked sixth among Others, and ninth for both Blacks and Hispanics. Diabetes mellitus ranked fifth among Blacks, Hispanics, and Others, but ranked seventh among Whites.

Alzheimer's disease ranked sixth among Whites and eighth among Blacks, but did not rank among Hispanics or Others. Conditions originating in the perinatal period ranked sixth among Blacks and Hispanics; this cause was not ranked among Whites or Others. Additionally, assault ranked seventh among Blacks and Hispanics, but again was not ranked among Whites. Assault, congenital malformations, deformations, and chromosomal abnormalities, and septicemia tied for seventh, eighth, and ninth position among Others. Intentional self-harm ranked eighth among Whites, tied for ninth/tenth among Hispanics, and tied for tenth/eleventh position among Others but was not ranked among Blacks.

Chronic liver disease and cirrhosis ranked tenth among Whites, eighth among Hispanics, tied for tenth/eleventh position among Others but was not ranked among Blacks. On the other hand, septicemia ranked eleventh among Whites and twelfth among Blacks and Hispanics. Nephritis, nephrotic syndrome, and nephrosis ranked tenth among Blacks, twelfth among Whites, and tied for eleventh/twelfth position among Others.

Influenza and pneumonia was ranked ninth among Whites, but was not ranked in any other group. Likewise, HIV was ranked eleventh among Blacks, but again was not among the top leading causes of death in any other group. Congenital malformations, deformations, and chromosomal abnormalities ranked eleventh among Hispanics. Parkinson's disease tied for eleventh/twelfth position among Others (Table 6).

Table 6. Leading Causes of Death by Race/Ethnicity, Tarrant County, 2005

	White n (% , Rate)	Black n (% , Rate)	Hispanic n (% , Rate)	Other n (% , Rate)
1	Diseases of the Heart 2,077 (27.6, 239.4)	Diseases of the Heart 338 (24.6, 289.9)	Diseases of the Heart 121 (15.6, 141.8)	Malignant Neoplasms 48 (27.6, 91.1)
2	Malignant Neoplasms 1,649 (21.9, 183.9)	Malignant Neoplasms 305 (22.2, 261.3)	Malignant Neoplasms 117 (15.1, 96.8)	Diseases of the Heart 45 (25.9, 101.8)
3	Cerebrovascular Dis. 537 (7.1, 63.6)	Cerebrovascular Dis. 87 (6.3, 81.8)	Accidents 85 (11.0, 26.2)	Cerebrovascular Dis. 15 (8.6, 38.5)
4	Chr. Lower Resp. Dis. 508 (6.7, 59.4)	Accidents 74 (5.4, 35.3)	Cerebrovascular Dis. 49 (6.3, 52.7)	Accidents 7 (4.0, 7.2)
5	Accidents 297 (3.9, 33.1)	Diabetes Mellitus 63 (4.6, 52.4)	Diabetes Mellitus 44 (5.7, 40.9)	Diabetes Mellitus 6 (3.4, 18.8)
6	Alzheimer's Disease 240 (3.2, 28.9)	Con. of Perinatal Per. 49 (3.6, 17.5)	Con. of Perinatal Per. 34 (4.4, 4.8)	Chr. Lower Resp. Dis. 5 (2.9, 17.6)
7	Diabetes Mellitus 184 (2.4, 20.5)	Assault 42 (3.1, 19.0)	Assault 32 (4.1, 7.3)	Assault / Congenital Mal., etc. / Septicemia
8	Intentional Self-Harm 148 (2.0, 15.6)	Alzheimer's Disease 36 (2.6, 43.7)	Chr. Liver Dis. & Cir. 24 (3.1, 12.3)	
9	Influenza & Pneum. 124 (1.6, 14.6)	Chr. Lower Resp. Dis. 33 (2.4, 27.7)	Intentional Self-Harm / Chr. Lower Resp. Dis.	<5*)
10	Chr. Liver Dis. & Cir. 107 (1.4, 10.7)	Nephritis, etc. 28 (2.0, 23.8)	21 (2.7, 5.6 / 30.1)	Chr. Liver Dis. & Cir. / Intentional Self-Harm
11	Septicemia 106 (1.4, 12.3)	HIV 26 (1.9, 12.6)	Congenital Mal., *etc*. 18 (2.3, 2.7)	<5*
12	Nephritis, etc. 103 (1.4, 12.0)	Septicemia 22 (1.6, 16.3)	Septicemia 14 (1.8, 14.2)	Parkinson's / Nephritis <5*

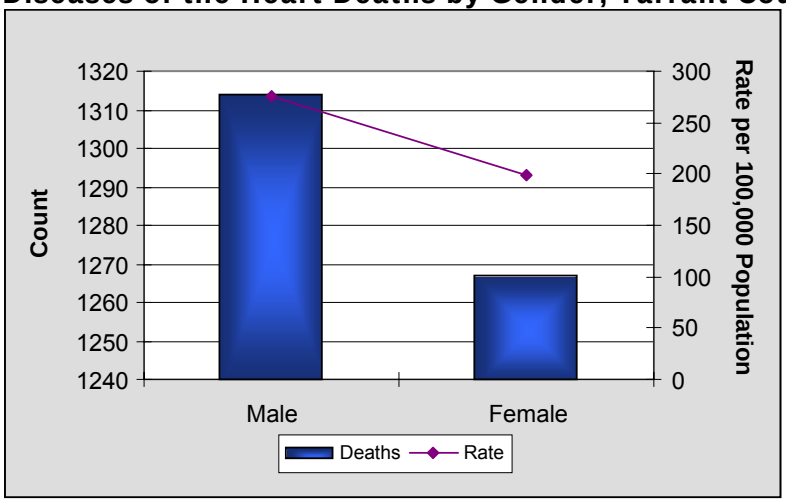
Percent of total deaths attributed to specific cause
Rates adjusted using the 2000 standard population; rate per 100,000 population
Data Source: Texas Department of State Health Services, Center for Vital Statistics

LEADING CAUSES OF DEATH IN TARRANT COUNTY, 2005

1. DISEASES OF THE HEART

A total of 2,581 deaths (an age-adjusted rate of 233.1 deaths per 100,000 population) attributed to diseases of the heart were reported in Tarrant County in 2005. The age adjusted death rate among males (1,314 deaths, 274.9 per 100,000 population) was approximately forty percent greater than among females (1,267 deaths, 198.2 per 100,000 population) (Figure 2).

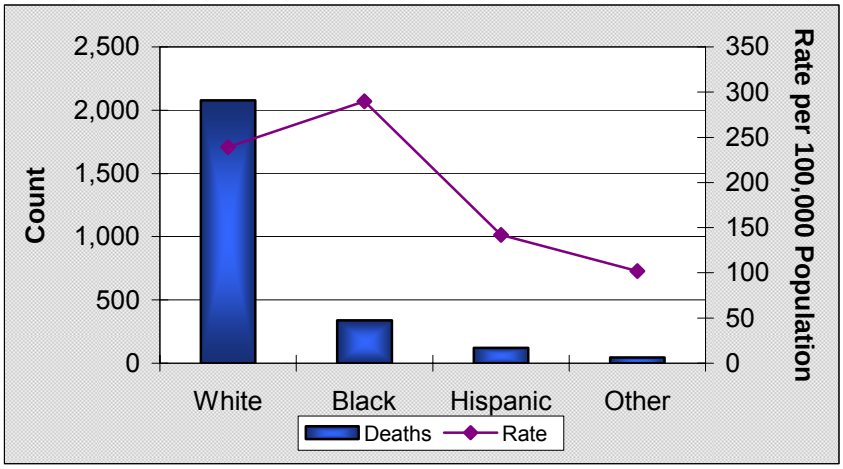
Figure 2. Diseases of the Heart Deaths by Gender, Tarrant County, 2005



Age-adjusted death rate standardized to 2000 population.
Data Source: Texas Department of State Health Services – Center for Vital Statistics

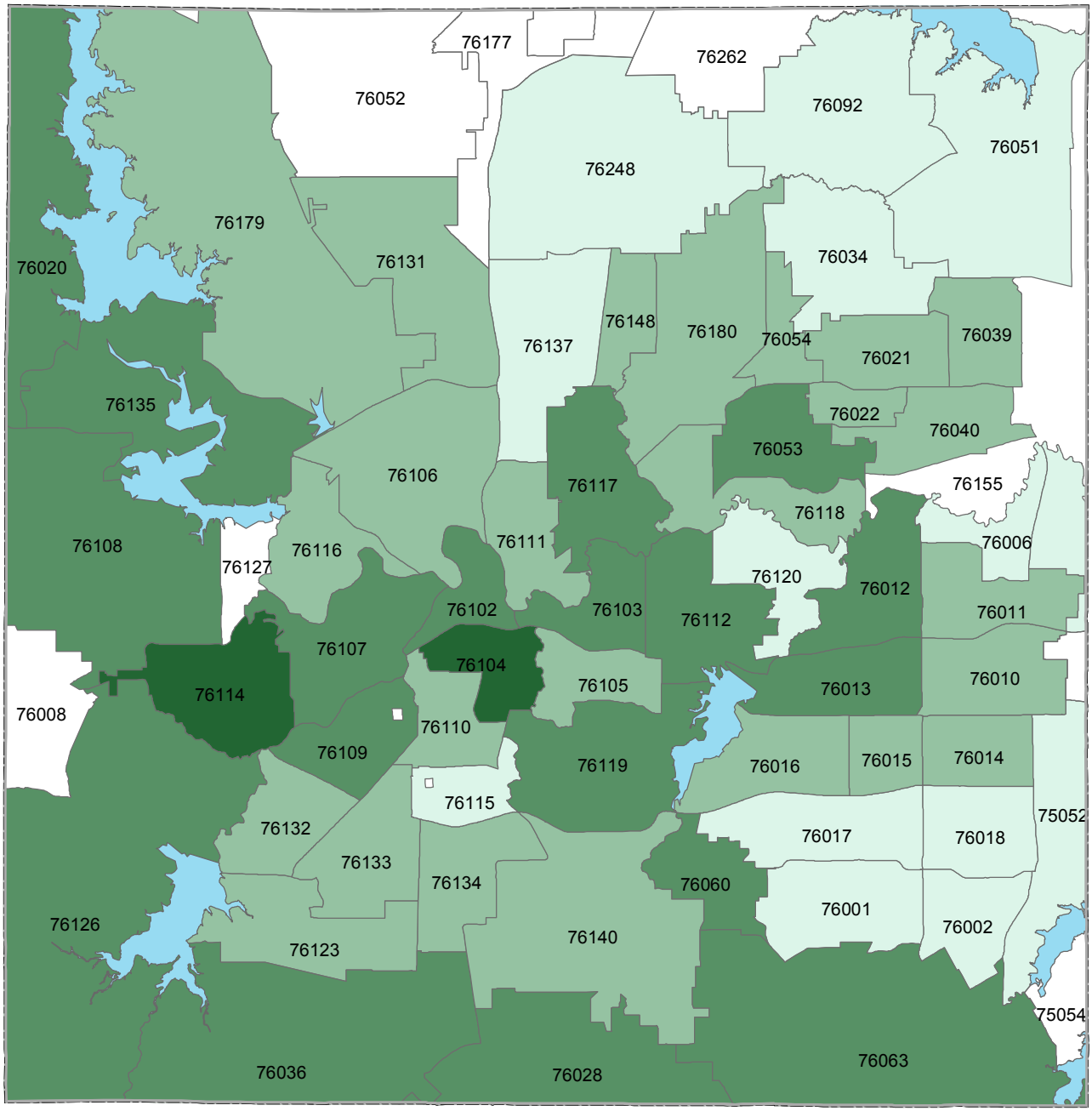
Among racial/ethnic groups, the highest age-adjusted death rate due to diseases of the heart was observed among Blacks (338 deaths, 289.9 per 100,000 population). The rate among Blacks was similar to that of Whites (2,077 deaths, 239.4 per 100,000 population), but was twice that of Hispanics (121 deaths, 141.8 per 100,000 population), and three times that of Others (45 deaths, 101.8 per 100,000 population) (Figure 3).

Figure 3. Diseases of the Heart Deaths by Race/Ethnicity, Tarrant County, 2005



Age-adjusted death rate standardized to 2000 population.
Data Source: Texas Department of State Health Services – Center for Vital Statistics

Figure 4: Geographic Distribution of Diseases of the Heart Deaths by ZIP Code, Tarrant County, 2005



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Rate per 100,000

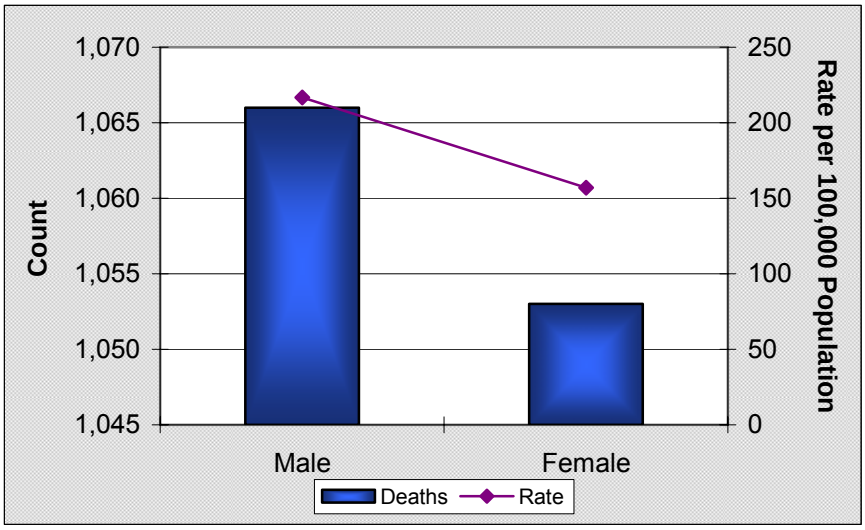
- 50.17 - 111.51
- 111.52 - 223.01
- 223.02 - 334.52
- 334.53 - 446.03
- Excluded or No Data
- Water
- County Boundary

GIS Geographic Information Systems TARRANT COUNTY Public Health

2. MALIGNANT NEOPLASMS (CANCER)

Overall, there were 2,119 deaths (an age-adjusted rate of 180.5 per 100,000 population) attributed to malignant neoplasms (cancer) reported in Tarrant County for 2005. Death rates were slightly higher among males (1,066 deaths, 216.7 per 100,000 population) than females (1,053 deaths, 157.0 per 100,000 population) (Figure 5).

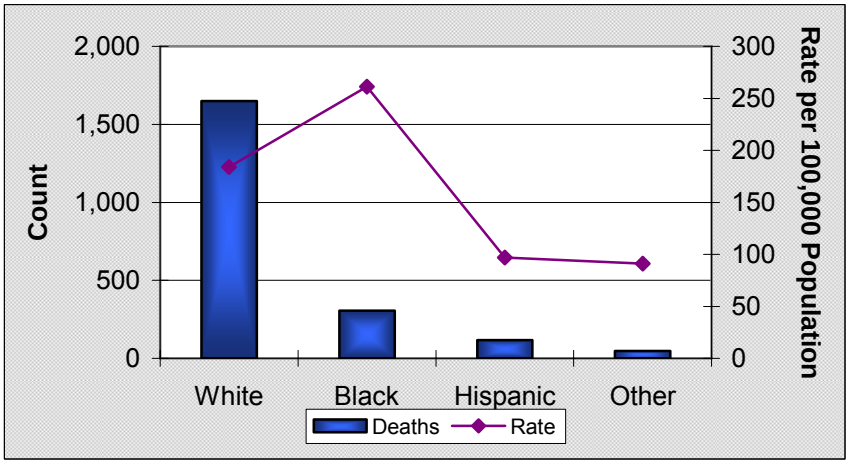
Figure 5. Malignant Neoplasm (Cancer) Deaths by Gender, Tarrant County, 2005



Age-adjusted death rate standardized to 2000 population.
Data Source: Texas Department of State Health Services – Center for Vital Statistics

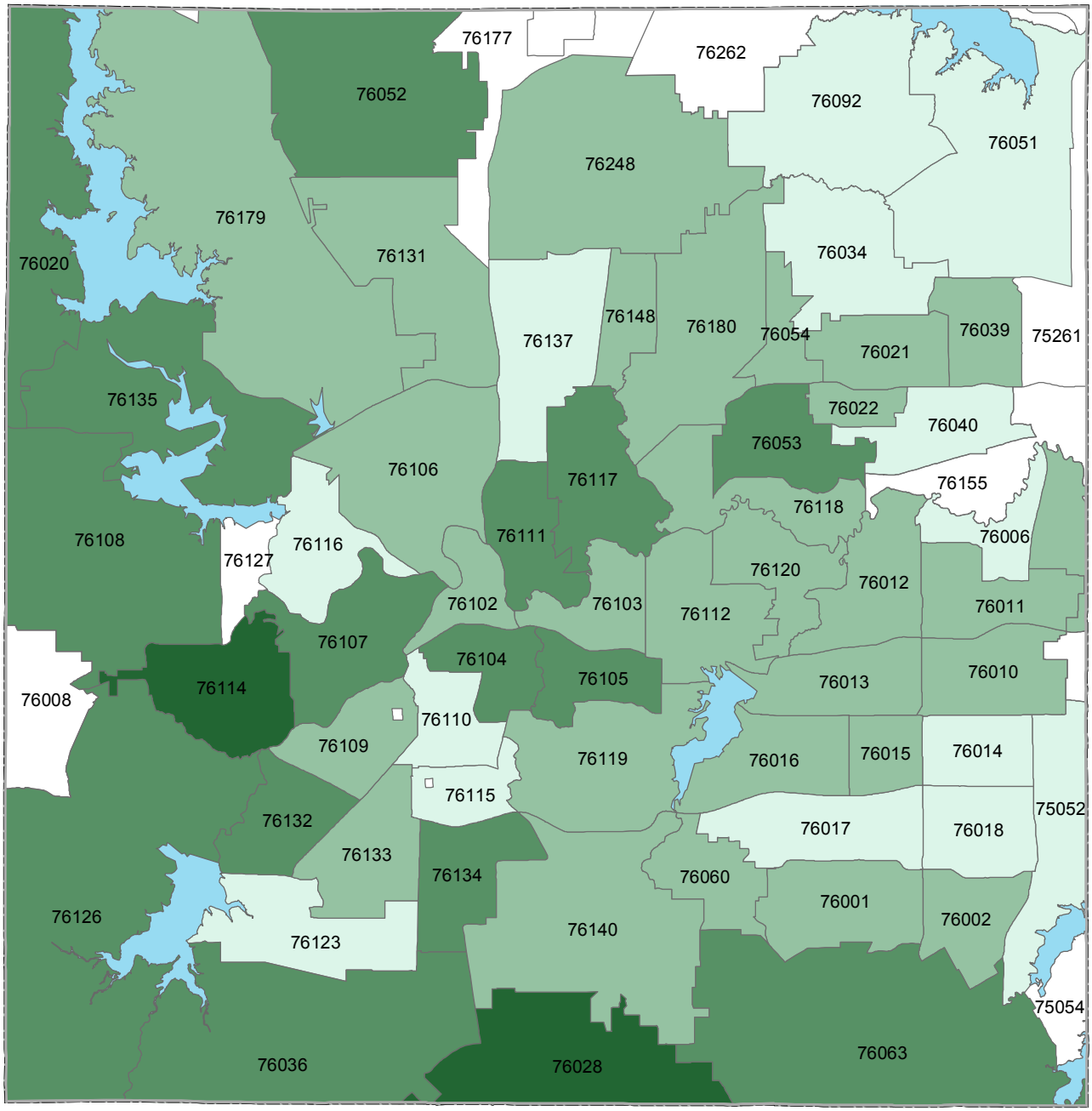
Among racial/ethnic groups, the highest age-adjusted death rate due to malignant neoplasms (cancers) was observed among Blacks. The rate among Blacks (305 deaths, 261.3 per 100,000 population) was about three times higher than Others (48 deaths, 91.1 per 100,000 population) and Hispanics (117 deaths, 96.8 per 100,000 population), but was only slightly higher than Whites (1,649 deaths, 183.9 per 100,000 population) (Figure 6).

Figure 6. Malignant Neoplasm (Cancer) Deaths by Race/Ethnicity, Tarrant County, 2005



Age-adjusted death rate standardized to 2000 population.
Data Source: Texas Department of State Health Services – Center for Vital Statistics

Figure 7: Geographic Distribution of Malignant Neoplasm (Cancer) Deaths by ZIP Code, Tarrant County, 2005



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Rate per 100,000

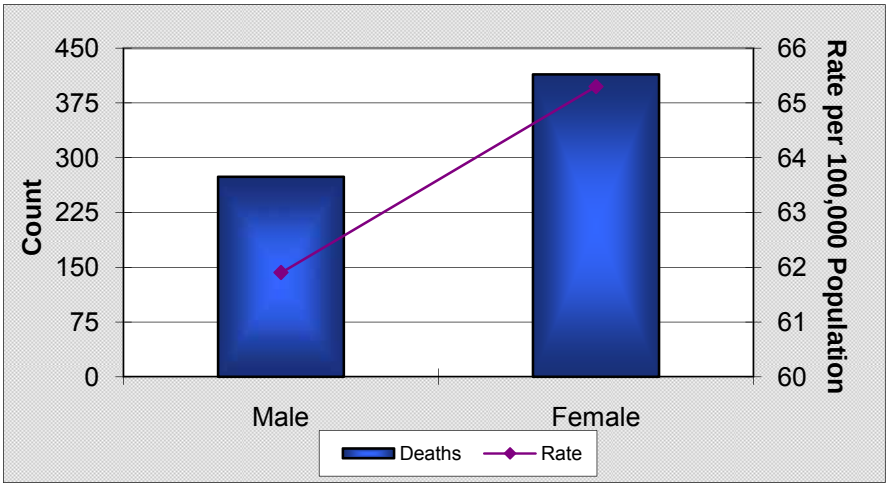
- 41.87 - 96.16
- 96.17 - 192.32
- 192.33 - 288.49
- 288.50 - 384.65
- No or Excluded Data
- Water
- County Boundary

GIS Geographic Information Systems TARRANT COUNTY Public Health

3. CEREBROVASCULAR DISEASE (STROKE)

Overall, there were 688 deaths (an age-adjusted rate of 64.7 per 100,000 population) attributed to cerebrovascular disease (stroke) reported in Tarrant County for 2005. Death rates among males (274 deaths, 61.9 per 100,000 population) and females (414 deaths, 65.3 per 100,000 population) (Figure 8) were similar.

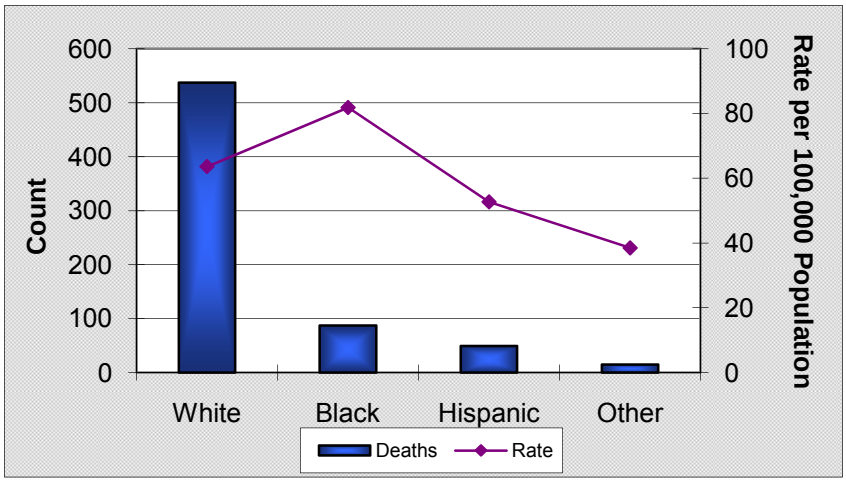
Figure 8. Cerebrovascular Disease (Stroke) Deaths by Gender, Tarrant County, 2005



Age-adjusted death rate standardized to 2000 population.
Data Source: Texas Department of State Health Services – Center for Vital Statistics

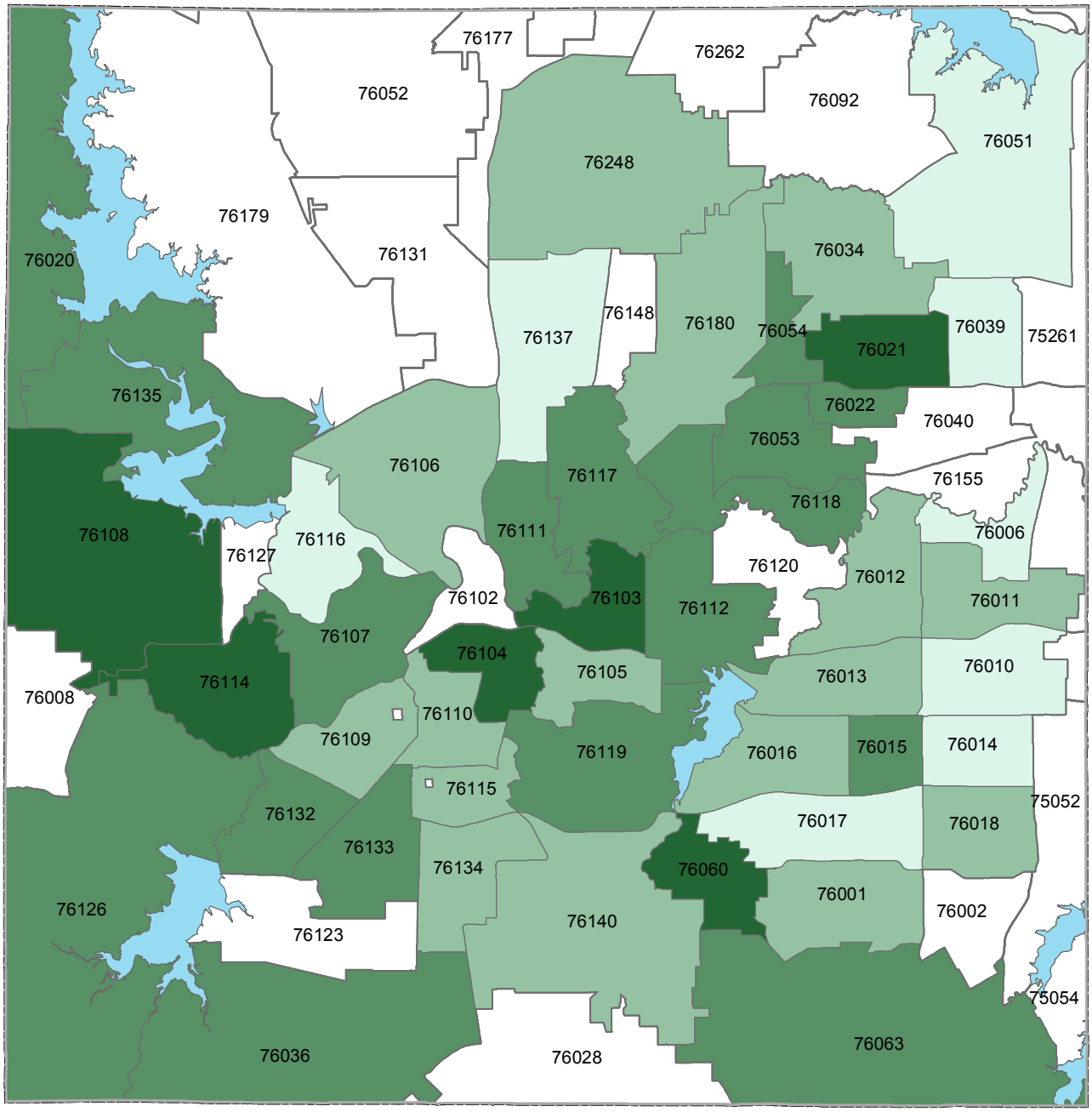
Among racial/ethnic groups, the highest age-adjusted death rate due to cerebrovascular disease (stroke) was observed among Blacks. The rate among Blacks (87 deaths, 81.8 per 100,000 population) was slightly higher than Whites (537 deaths, 63.6 per 100,000 population) and Hispanics (49 deaths, 52.7 per 100,000 population) but was twice as high as that among Others (15 deaths, 38.5 per 100,000 population) (Figure 9).

Figure 9. Cerebrovascular Disease (Stroke) Deaths by Race/Ethnicity, Tarrant County, 2005



Age-adjusted death rate standardized to 2000 population.
Data Source: Texas Department of State Health Services – Center for Vital Statistics

Figure 10: Geographic Distribution of Cerebrovascular Disease (Stroke) Deaths by ZIP Code, Tarrant County, 2005



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Rate per 100,000

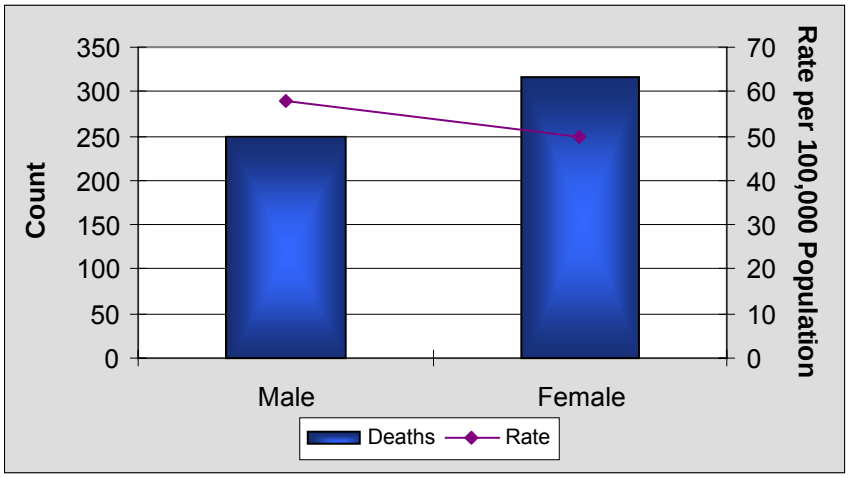
- 14.27 - 29.72
- 29.73 - 59.43
- 59.44 - 89.15
- 89.16 - 118.86
- No or Excluded Data
- Water
- County Boundary

GIS Geographic Information Systems TARRANT CO. Public Health

4. CHRONIC LOWER RESPIRATORY DISEASE

Overall, there were 567 deaths (an age-adjusted rate of 52.7 per 100,000 population) attributed to chronic lower respiratory disease reported in Tarrant County for 2005. Death rates among males (250 deaths, 58.0 per 100,000 population) and females (317 deaths, 50.0 per 100,000 population) (Figure 11) were similar.

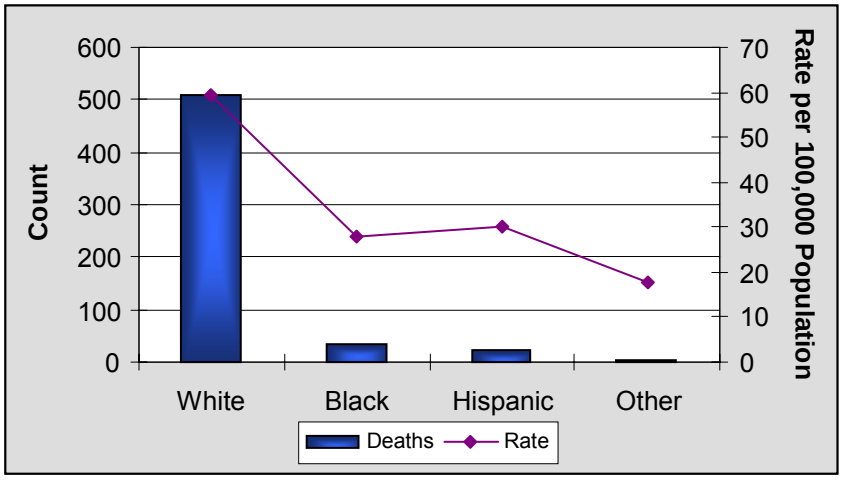
Figure 11. Chronic Lower Respiratory Disease Deaths by Gender, Tarrant County, 2005



Age-adjusted death rate standardized to 2000 population.
Data Source: Texas Department of State Health Services – Center for Vital Statistics

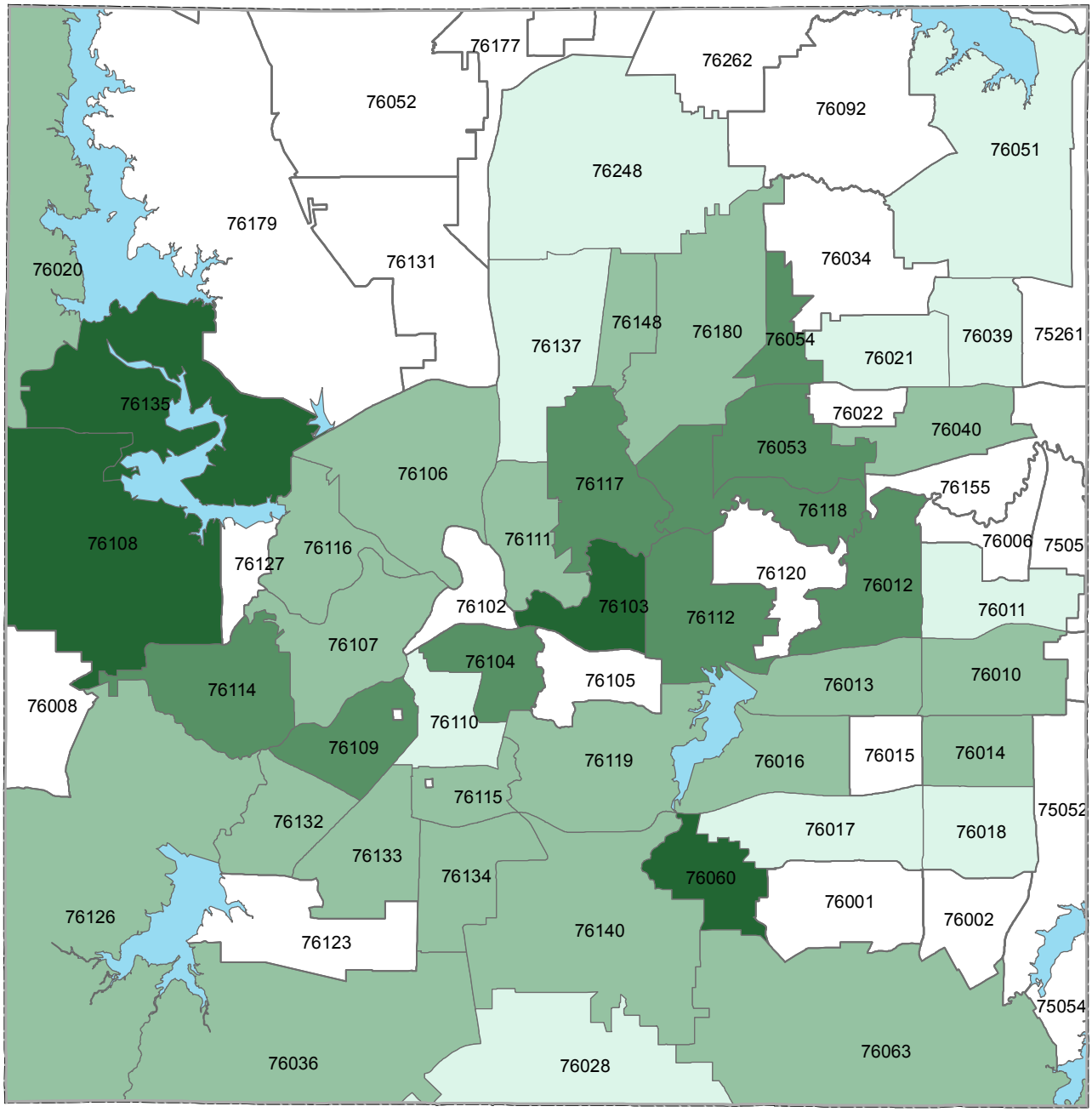
Among racial/ethnic groups, the highest age-adjusted death rate due to chronic lower respiratory disease was observed among Whites. The rate among Whites (508 deaths, 59.4 per 100,000 population) was twice as high as Blacks (33 deaths, 27.7 per 100,000 population) and Hispanics (21 deaths, 30.1 per 100,000 population) and was more than three times greater than among Others (5 deaths, 17.6 per 100,000 population) (Figure 12).

Figure 12. Chronic Lower Respiratory Disease Deaths by Race/Ethnicity, Tarrant County, 2005



Age-adjusted death rate standardized to 2000 population.
Data Source: Texas Department of State Health Services – Center for Vital Statistics

Figure 13: Geographic Distribution of Chronic Lower Respiratory Disease by ZIP Code, Tarrant County, 2005



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Rate per 100,000

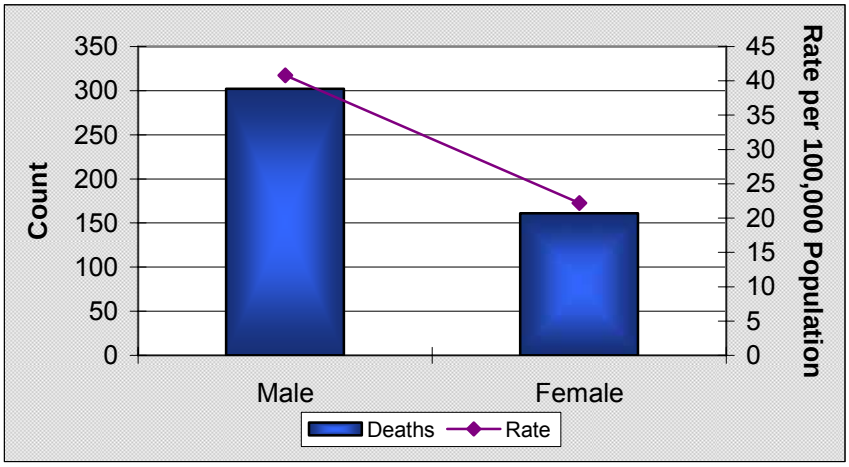
- 11.9 - 26.7
- 26.8 - 53.4
- 53.5 - 80.0
- 80.1 - 106.7
- No or Excluded Data
- Water
- County Boundary

GIS Geographic Information Systems TARRANT COUNTY Public Health

5. ACCIDENTS (UNINTENTIONAL INJURIES)

Overall, there were 463 deaths (an age-adjusted rate of 31.7 per 100,000 population) attributed to accidents (unintentional injuries) reported in Tarrant County for 2005. Death rates among males (302 deaths, 40.8 per 100,000 population) were almost twice as high as rates among females (161 deaths, 22.2 per 100,000 population) (Figure 14).

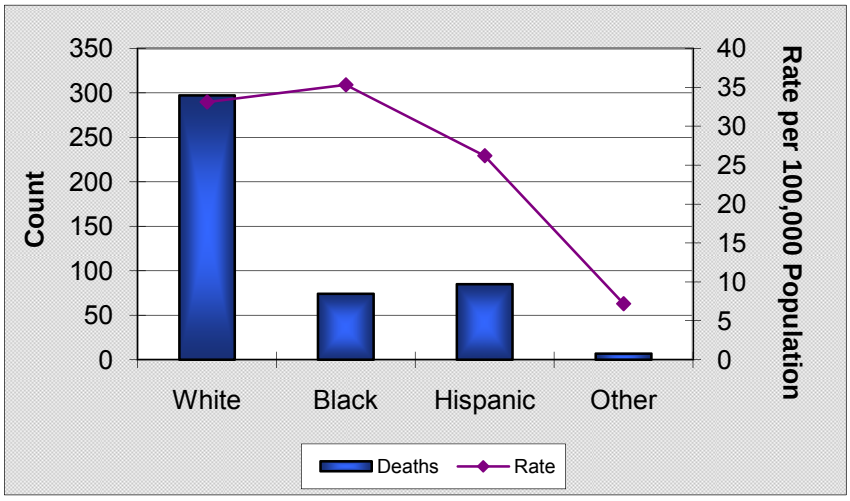
Figure 14. Accident (Unintentional Injury) Deaths by Gender, Tarrant County, 2005



Age-adjusted death rate standardized to 2000 population.
Data Source: Texas Department of State Health Services – Center for Vital Statistics

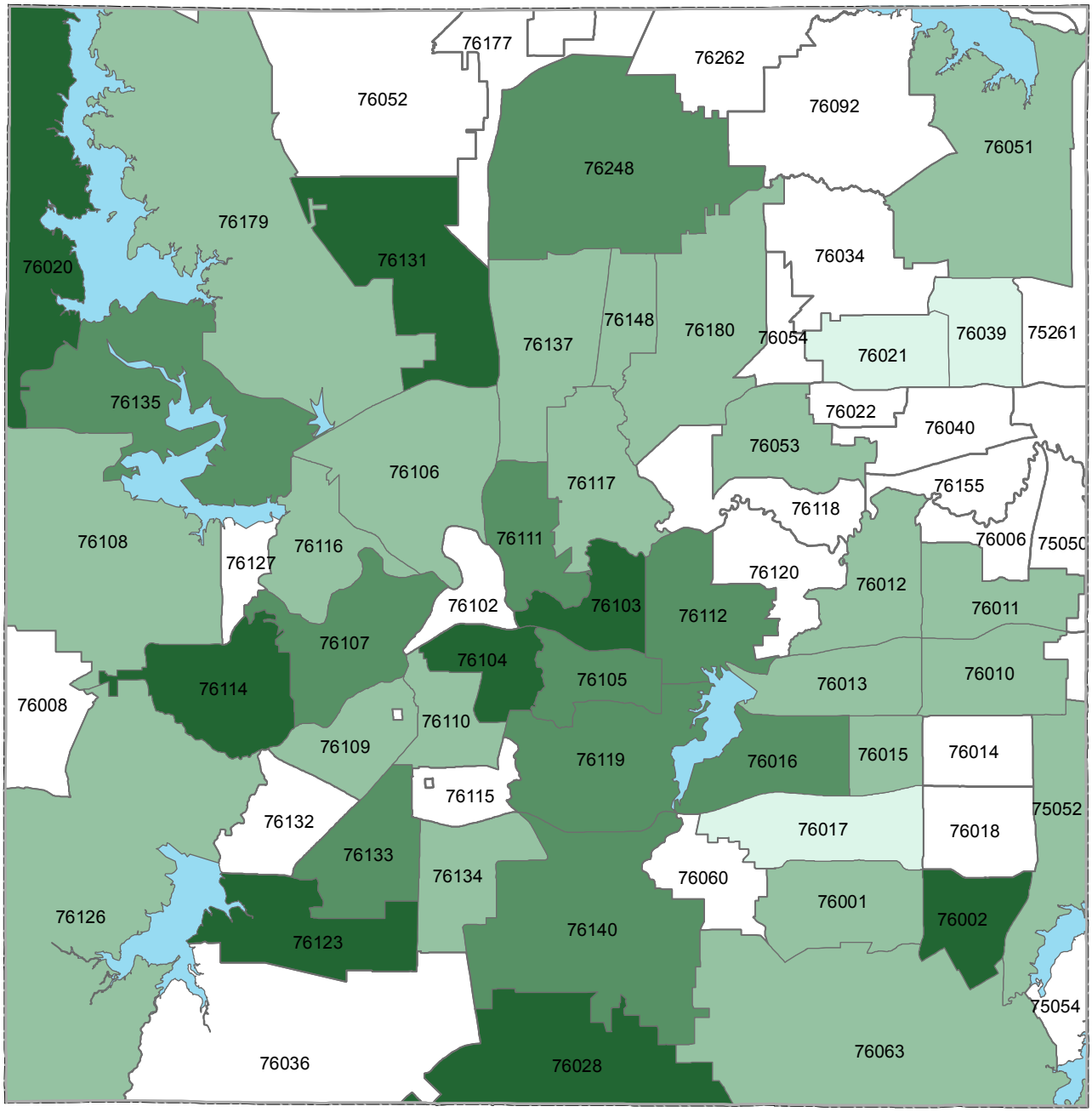
Among racial/ethnic groups, the highest age-adjusted death rate due to accidents (unintentional injuries) was observed among Blacks. The rate among Blacks (74 deaths, 35.3 per 100,000 population) and Whites (297 deaths, 33.1 per 100,000 population) were similar. However, the rate among Blacks was thirty-five percent greater than that of Hispanics (85 deaths, 26.2 per 100,000 population) and almost five times that of Others (7 deaths, 7.2 per 100,000 population) (Figure 15).

Figure 15. Accident (Unintentional Injury) Deaths by Race/Ethnicity, Tarrant County, 2005



Age-adjusted death rate standardized to 2000 population.
Data Source: Texas Department of State Health Services – Center for Vital Statistics

Figure 16: Geographic Distribution of Accident (Unintentional Injury) Deaths by ZIP Code, Tarrant County, 2005



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Rate per 100,000

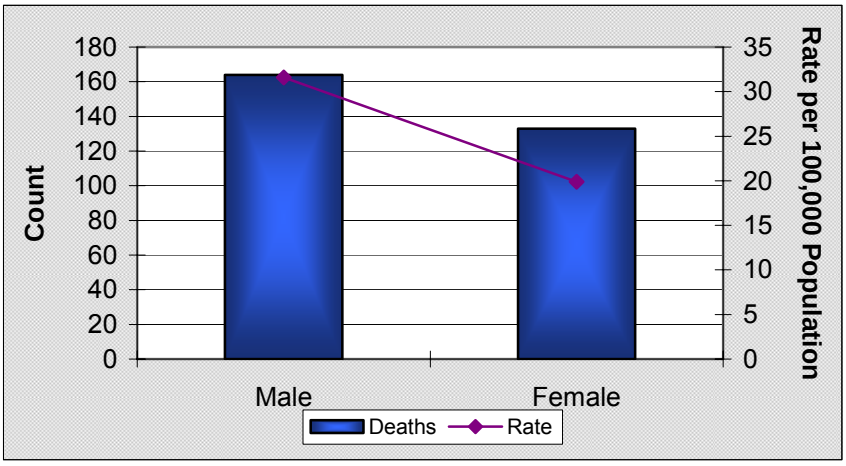
- 14.27 - 19.44
- 19.45 - 38.87
- 38.88 - 58.31
- 58.32 - 77.75
- No or Excluded Data
- Water
- County Boundary

GIS Geographic Information Systems TARRANT COUNTY Public Health

6. DIABETES MELLITUS

Overall, there were 297 deaths (an age-adjusted rate of 25.0 per 100,000 population) attributed to diabetes mellitus reported in Tarrant County for 2005. Death rates among males (164 deaths, 31.6 per 100,000 population) were about sixty percent higher than rates among females (133 deaths, 19.9 per 100,000 population) (Figure 17).

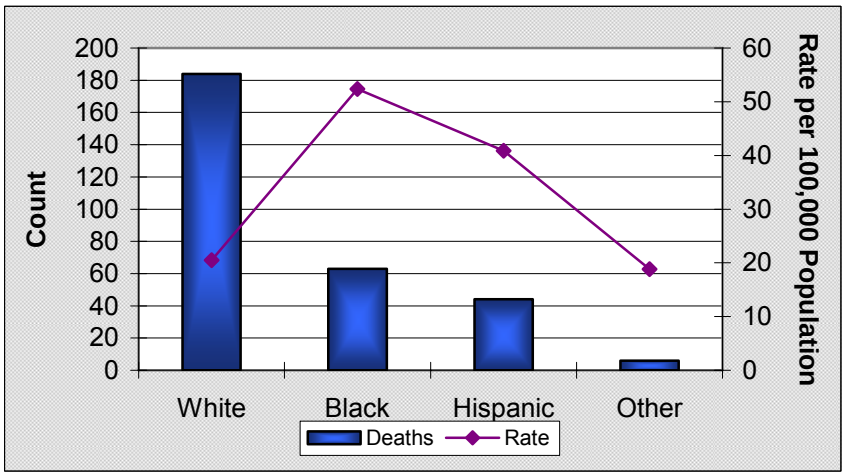
Figure 17. Diabetes Mellitus Deaths by Gender, Tarrant County, 2005



Age-adjusted death rate standardized to 2000 population.
Data Source: Texas Department of State Health Services – Center for Vital Statistics

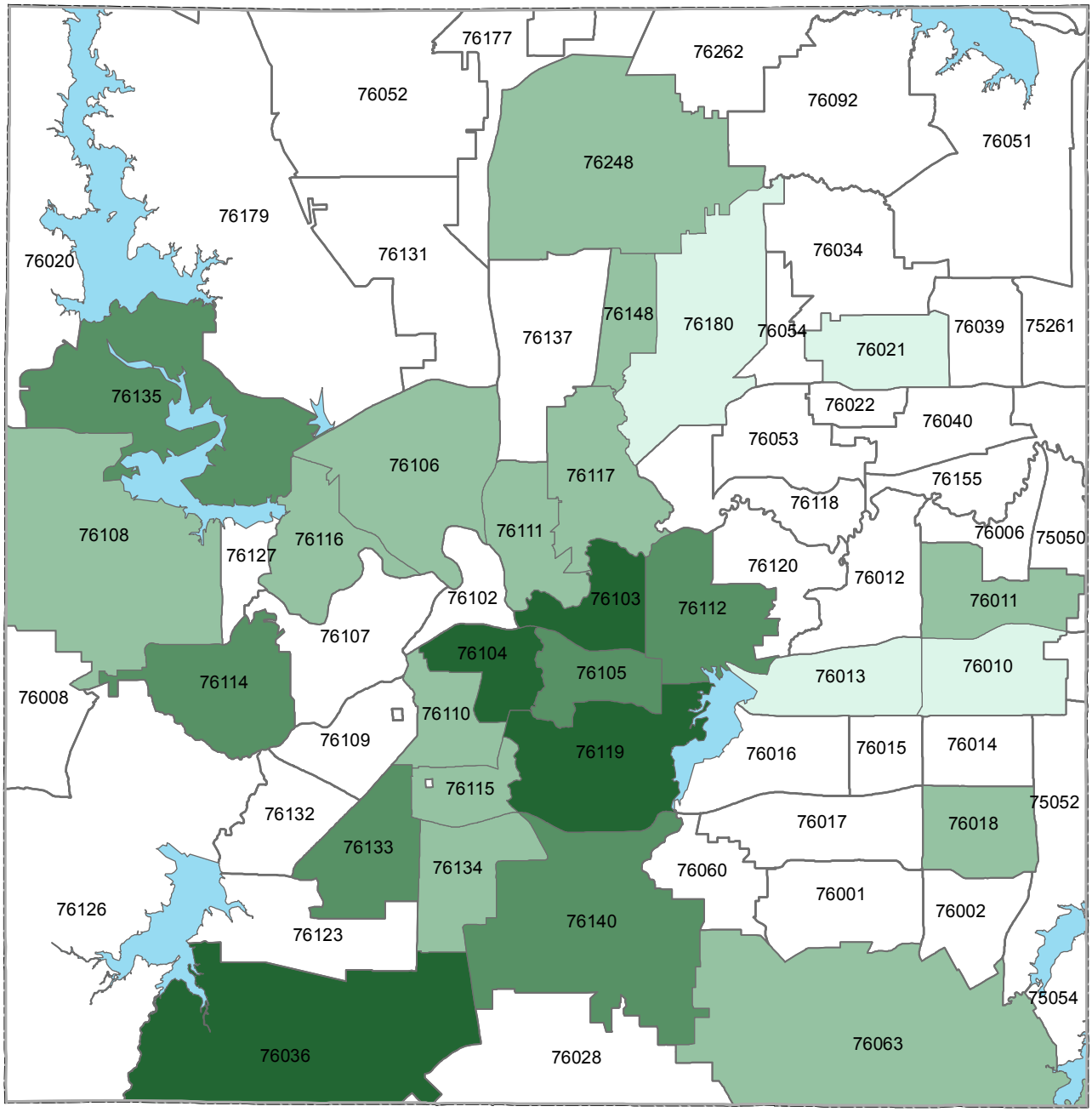
Among racial/ethnic groups, the highest age-adjusted death rate due to diabetes mellitus was observed among Blacks. The rate among Blacks (63 deaths, 52.4 per 100,000 population) was about thirty percent higher than that of Hispanics (44 deaths, 40.9 per 100,000 population), more than twice the rate among Whites (184 deaths, 20.5 per 100,000 population), and almost three times that of Others (6 deaths, 18.8 per 100,000 population) (Figure 18).

Figure 18. Diabetes Mellitus Deaths by Race/Ethnicity, Tarrant County, 2005



Age-adjusted death rate standardized to 2000 population.
Data Source: Texas Department of State Health Services – Center for Vital Statistics

Figure 19: Geographic Distribution of Diabetes Mellitus Deaths by ZIP Code, Tarrant County, 2005



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Rate per 100,000

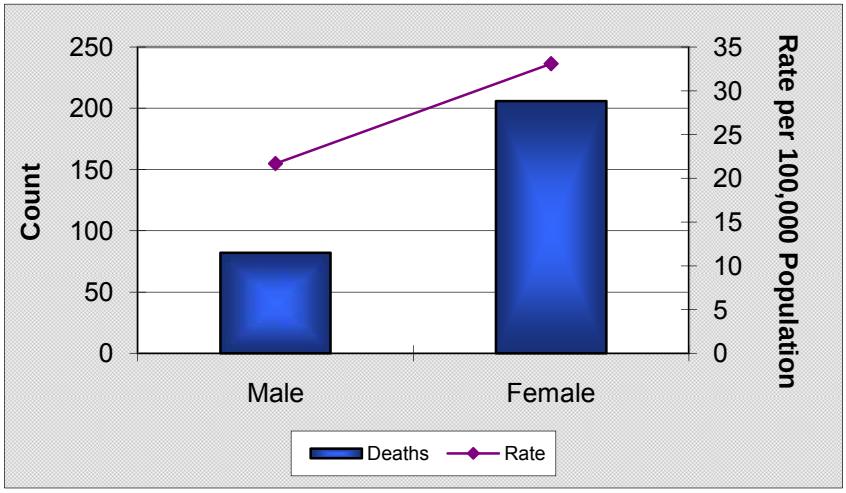
- 9.30 - 15.73
- 15.74 - 31.46
- 31.47 - 47.20
- 47.21 - 62.93
- No or Excluded Data
- Water
- County Boundary

GIS Geographic Information Systems TARRANT COUNTY Public Health

7. ALZHEIMER'S DISEASE

Overall, there were 288 deaths (an age-adjusted rate of 28.8 per 100,000 population) attributed to Alzheimer's disease reported in Tarrant County for 2005. Death rates among females (206 deaths, 33.1 per 100,000 population) were about fifty percent higher than rates among males (82 deaths, 21.7 per 100,000 population) (Figure 20).

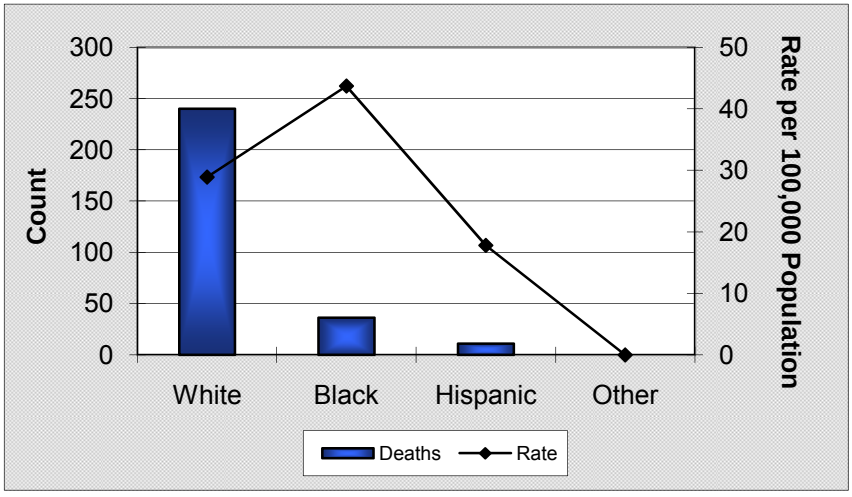
Figure 20. Alzheimer's Disease Deaths by Gender, Tarrant County, 2005



Age-adjusted death rate standardized to 2000 population.
Data Source: Texas Department of State Health Services – Center for Vital Statistics

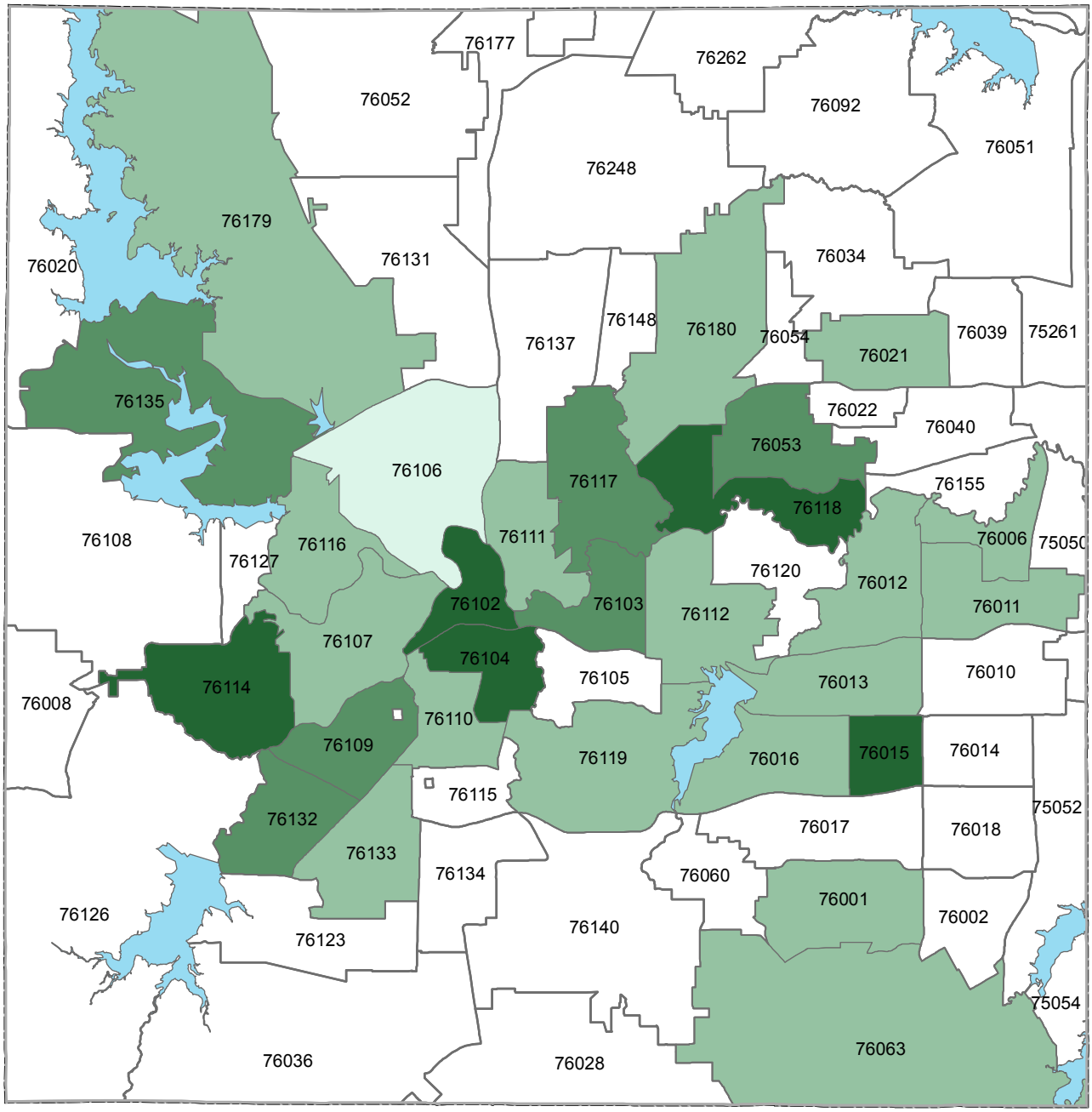
Among racial/ethnic groups, the highest age-adjusted death rate due to diabetes mellitus was observed among Blacks. The rate among Blacks (36 deaths, 43.7 per 100,000 population) was about fifty percent higher than that of Whites (240 deaths, 28.9 per 100,000 population) and more than twice the rate among Hispanics (11 deaths, 17.8 per 100,000 population). There were less than five deaths due to Alzheimer's disease among Others (Figure 21).

Figure 21. Alzheimer's Disease Deaths by Race/Ethnicity, Tarrant County, 2005



The numerator was too small for rate calculation among Others.
Age-adjusted death rate standardized to 2000 population.
Data Source: Texas Department of State Health Services – Center for Vital Statistics

Figure 22: Geographic Distribution of Alzheimer's Disease Deaths by ZIP Code, Tarrant County, 2005



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Rate per 100,000

- 11.61 - 15.87
- 15.88 - 31.74
- 31.75 - 47.61
- 47.62 - 63.48
- No or Excluded Data
- Water
- County Boundary

GIS Geographic Information Systems TARRANT COUNTY Public Health

8. INTENTIONAL SELF-HARM (SUICIDE)

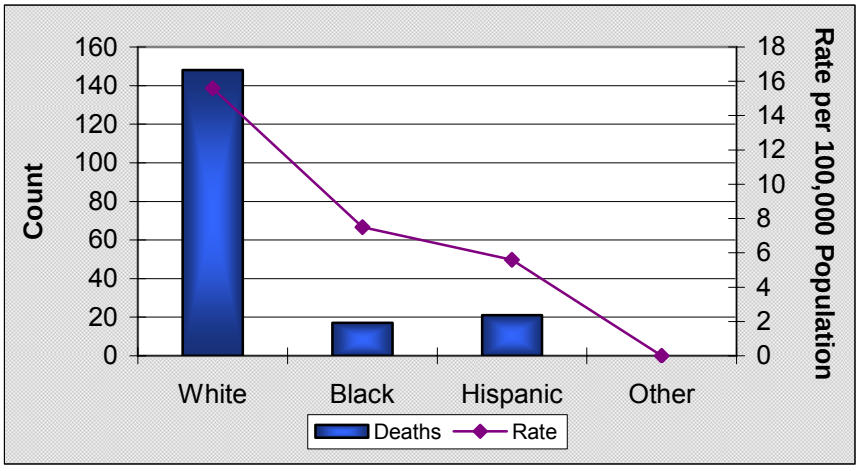
Overall, there were 189 deaths (an age-adjusted rate of 12.0 per 100,000 population) attributed to intentional self-harm (suicide) reported in Tarrant County for 2005. Death rates among males (147 deaths, 19.7 per 100,000 population) were approximately four times higher than rates among females (42 deaths, 5.1 per 100,000 population) (Figure 23).

Figure 23. Intentional Self-Harm (Suicide) Deaths by Gender, Tarrant County, 2005

Age-adjusted death rate standardized to 2000 population.
Data Source: Texas Department of State Health Services – Center for Vital Statistics

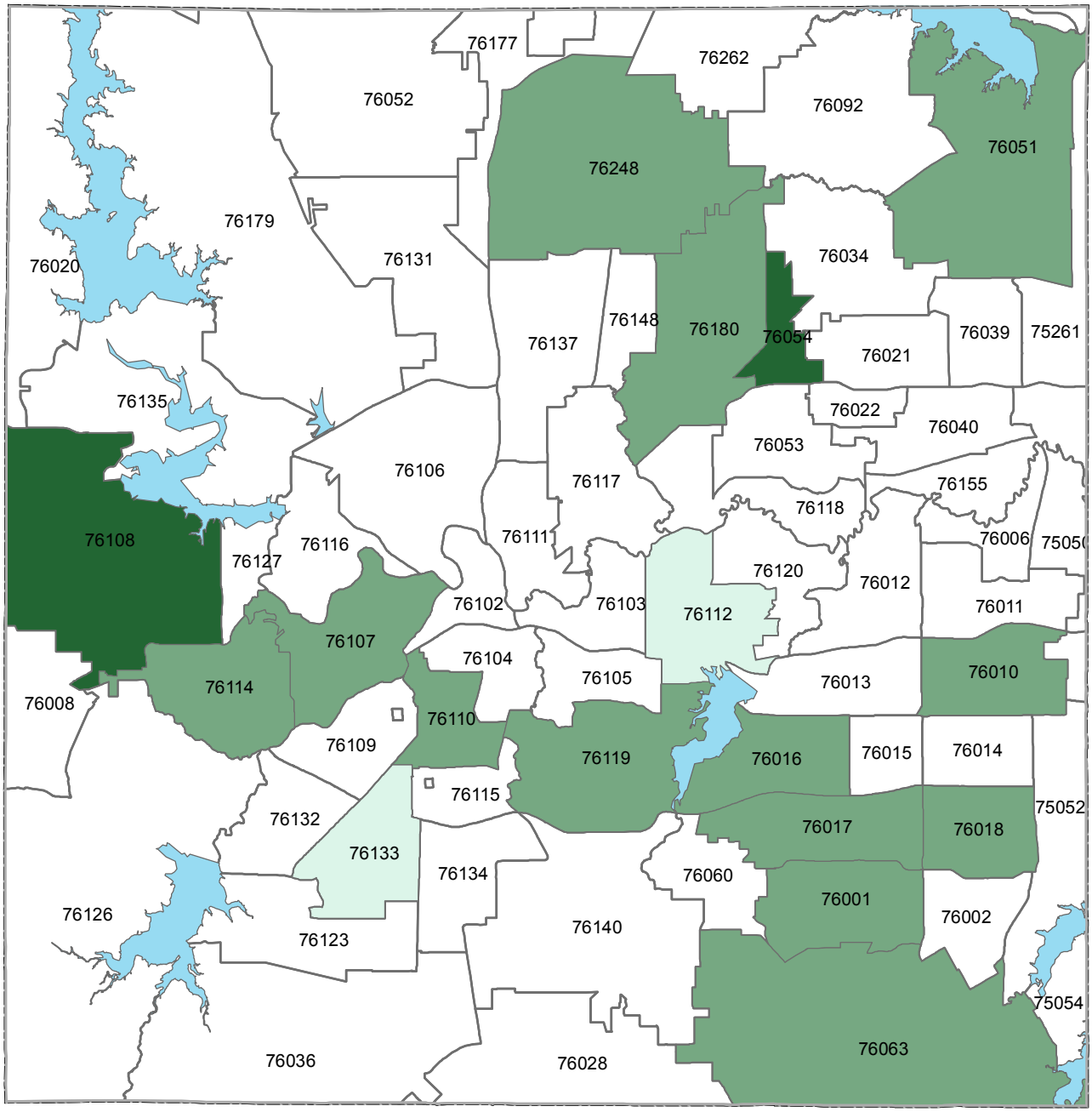
Among racial/ethnic groups, the highest age-adjusted death rate due to intentional self-harm (suicide) was observed among Whites. The rate among Whites (148 deaths, 15.6 per 100,000 population) was twice the rate of Blacks (17 deaths, 7.5 per 100,000 population) and three times greater than rates among Hispanics (21 deaths, 5.6 per 100,000 population). There were less than five deaths due to intentional self-harm (suicide) among Others (Figure 24).

Figure 24. Intentional Self-Harm (Suicide) Deaths by Race/Ethnicity, Tarrant County, 2005



The numerator was too small for rate calculation among Others.
Age-adjusted death rate standardized to 2000 population.
Data Source: Texas Department of State Health Services – Center for Vital Statistics

Figure 25: Geographic Distribution of Intentional Self Harm (Suicide) Deaths by ZIP Code, Tarrant County, 2005



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Rate per 100,000

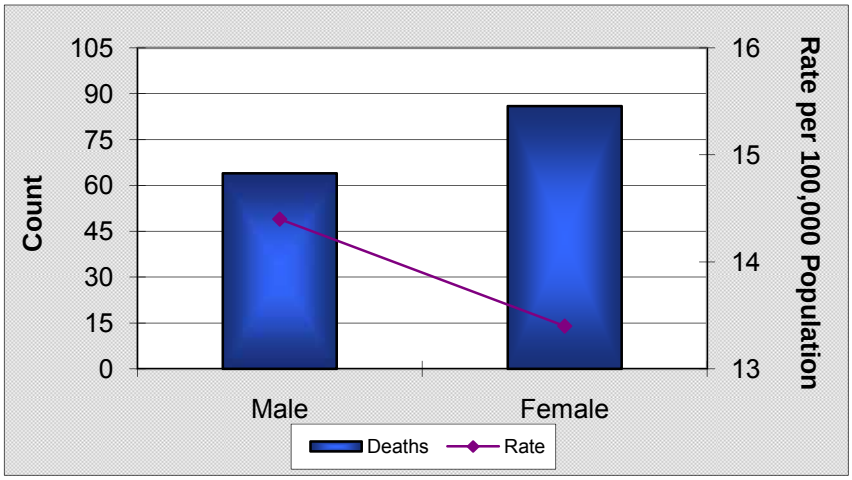
- 12.68 - 14.12
- 14.13 - 28.24
- 28.25 - 42.79
- No or Excluded Data
- Water
- County Boundary

GIS Geographic Information Systems TARRANT COUNTY Public Health

9. INFLUENZA AND PNEUMONIA

Overall, there were 150 deaths (an age-adjusted rate of 13.9 per 100,000 population) attributed to influenza and pneumonia reported in Tarrant County for 2005. Death rates among males (64 deaths, 14.4 per 100,000 population) and females (86 deaths, 13.4 per 100,000 population) were similar (Figure 26).

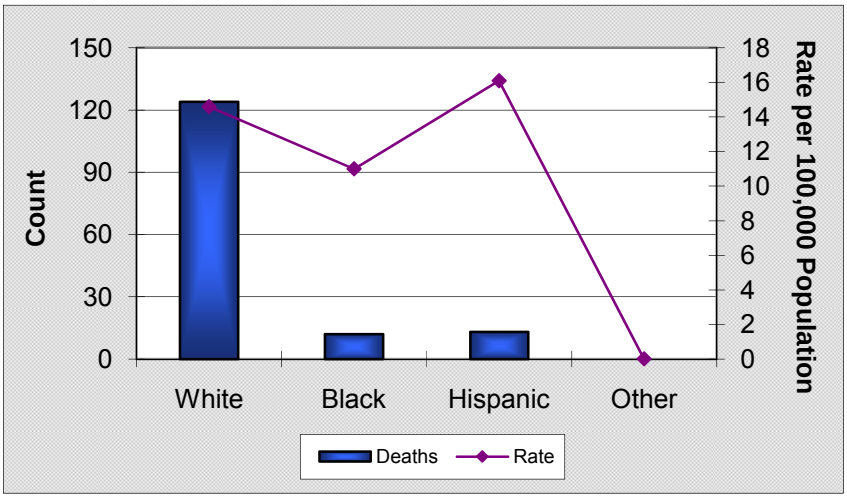
Figure 26. Influenza & Pneumonia Deaths by Gender, Tarrant County, 2005



Age-adjusted death rate standardized to 2000 population.
Data Source: Texas Department of State Health Services – Center for Vital Statistics

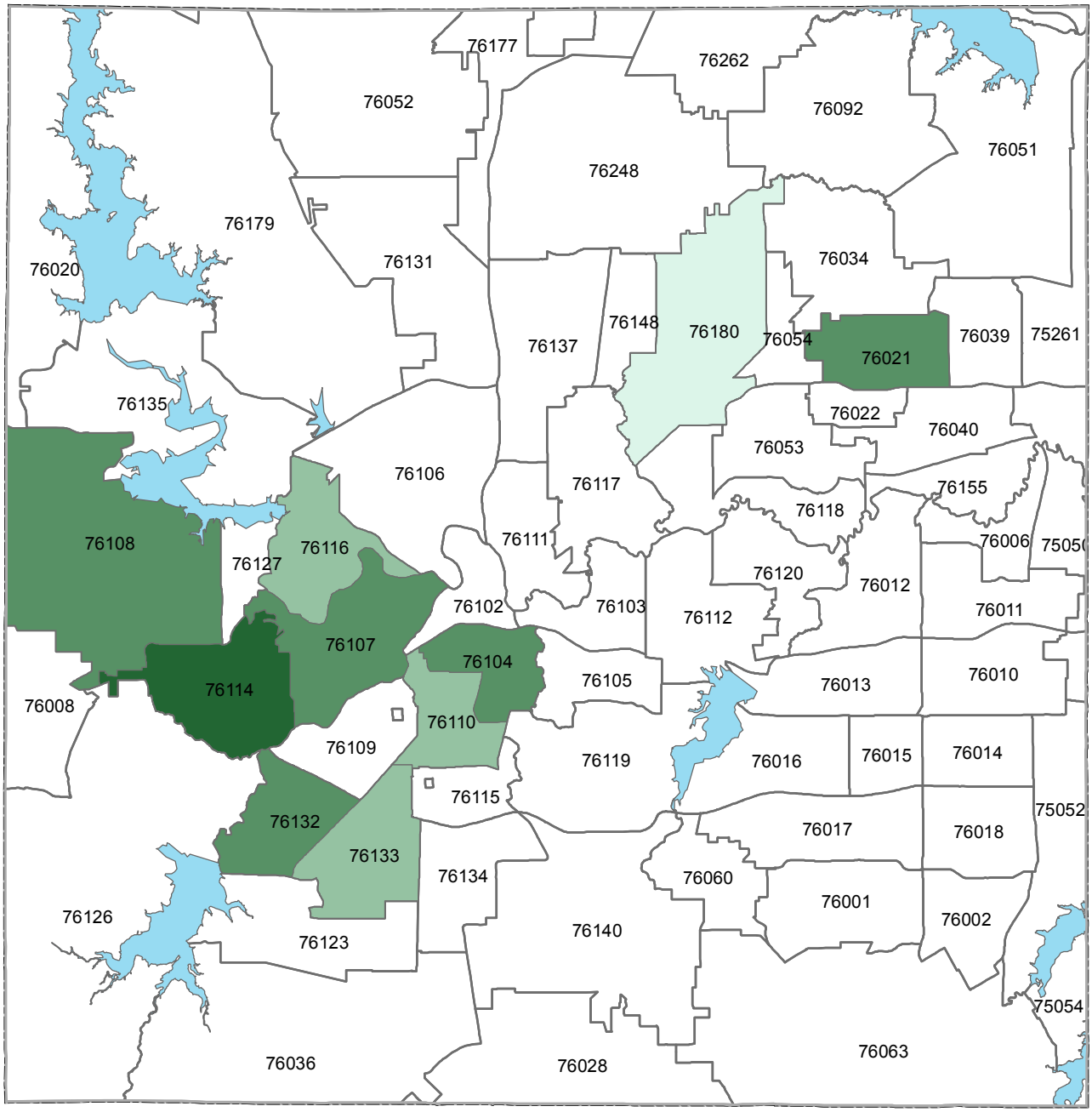
Among racial/ethnic groups, the highest age-adjusted death rate due to influenza and pneumonia was observed among Hispanics. The rate among Hispanics (13 deaths, 16.1 per 100,000 population) was slightly higher than that of Whites (124 deaths, 14.6 per 100,000 population) and fifty percent higher than rates among Blacks (12 deaths, 11.0 per 100,000 population). There were less than five deaths due to influenza and pneumonia among Others (Figure 27).

Figure 27. Influenza & Pneumonia Deaths by Race/Ethnicity, Tarrant County, 2005



The numerator was too small for rate calculation among Others.
Age-adjusted death rate standardized to 2000 population.
Data Source: Texas Department of State Health Services – Center for Vital Statistics

Figure 28: Geographic Distribution of Influenza & Pneumonia Deaths by ZIP Code, Tarrant County, 2005



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Rate per 100,000

- 9.23 - 10.23
- 10.24 - 20.46
- 20.47 - 30.69
- 30.70 - 40.92
- No or Excluded Data
- Water
- County Boundary

GIS Geographic Information Systems TARRANT COUNTY Public Health

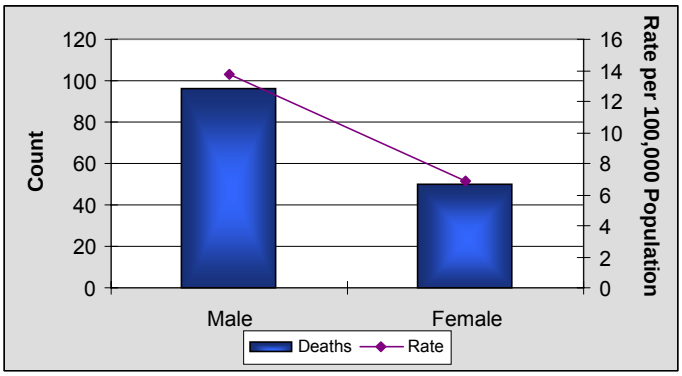
10, 11, & 12. CHRONIC LIVER DISEASE AND CIRRHOSIS; NEPHRITIS, NEPHROTIC SYNDROME, AND NEPHROSIS; SEPTICEMIA

The following diseases had 146 deaths each in Tarrant County during 2005, resulting in a three-way tie for the 10th, 11th, and 12th leading causes of death overall.

CHRONIC LIVER DISEASE AND CIRRHOSIS

Overall, there were 146 deaths (an age-adjusted rate of 10.2 per 100,000 population) attributed to chronic liver disease and cirrhosis reported in Tarrant County for 2005. Death rates among males (96 deaths, 13.7 per 100,000 population) were twice as high as rates among females (50 deaths, 6.9 per 100,000 population) (Figure 29).

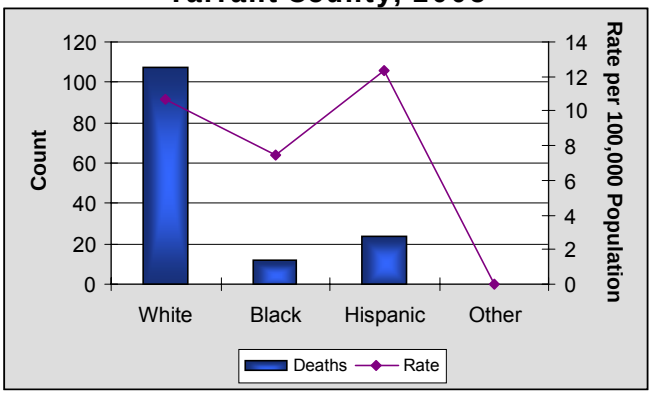
Figure 29. Chronic Liver Disease and Cirrhosis Deaths by Gender, Tarrant County, 2005



Age-adjusted death rate standardized to 2000 population.
Data Source: Texas Department of State Health Services – Center for Vital Statistics

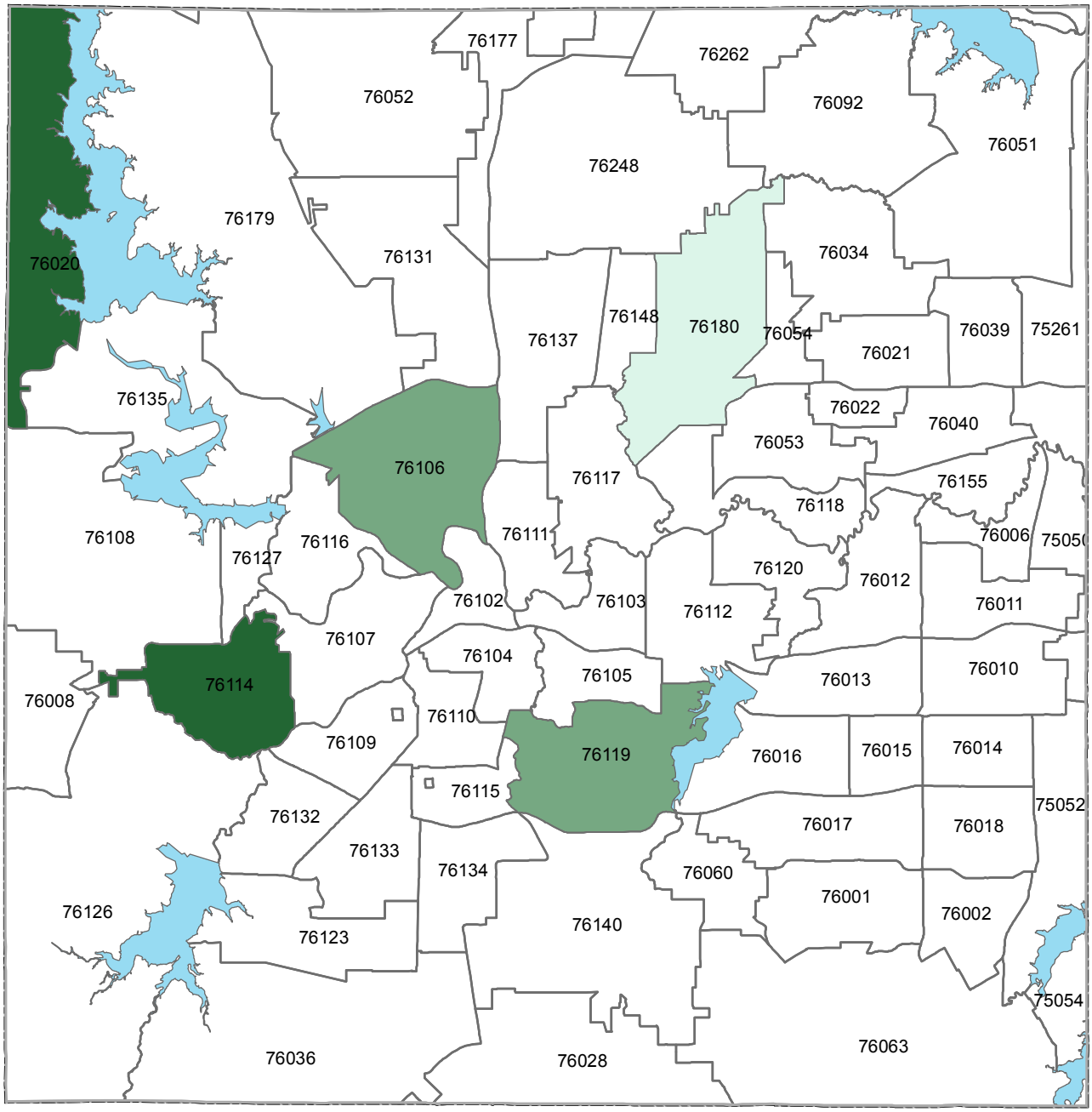
Among racial/ethnic groups, the highest age-adjusted death rate due to chronic liver disease and cirrhosis was observed among Hispanics. The rate among Hispanics (24 deaths, 12.3 per 100,000 population) was slightly higher than Whites (107 deaths, 10.7 per 100,000 population) and 60 percent higher than rates among Blacks (12 deaths, 7.5 per 100,000 population). There were less than five deaths due to chronic liver disease & cirrhosis among Others (Figure 30).

Figure 30. Chronic Liver Disease and Cirrhosis Deaths by Race/Ethnicity, Tarrant County, 2005



The numerator was too small for rate calculation among Others.
Age-adjusted death rate standardized to 2000 population.
Data Source: Texas Department of State Health Services – Center for Vital Statistics

Figure 31: Geographic Distribution of Chronic Liver Disease and Cirrhosis Deaths by ZIP Code, Tarrant County, 2005



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Rate per 100,000

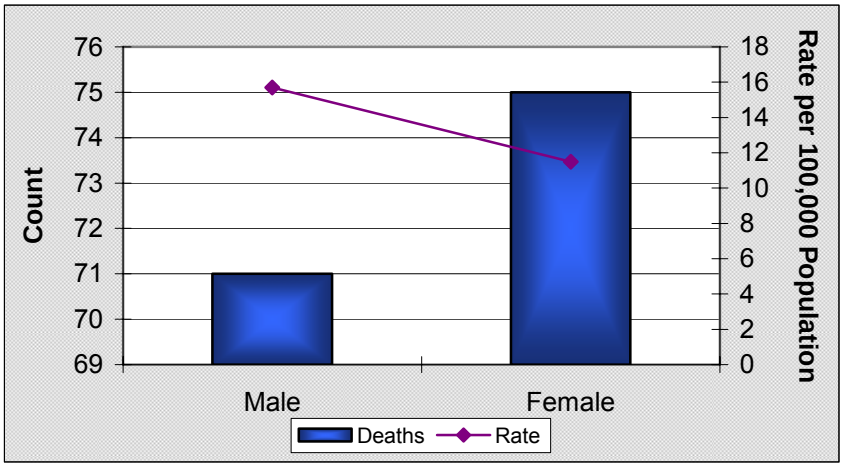
- 11.07 - 14.85
- 14.86 - 29.71
- 29.72 - 45.01
- No or Excluded Data
- Water
- County Boundary

GIS Geographic Information Systems TARRANT COUNTY Public Health

NEPHRITIS, NEPHROTIC SYNDROME, AND NEPHROSIS

Overall, there were 146 deaths (an age-adjusted rate of 13.4 per 100,000 population) attributed to nephritis, nephrotic syndrome, and nephrosis (nephritis, *etc.*) reported in Tarrant County for 2005. Death rates among males (71 deaths, 15.7 per 100,000 population) were fifty percent higher than rates among females (75 deaths, 11.5 per 100,000 population) (Figure 32).

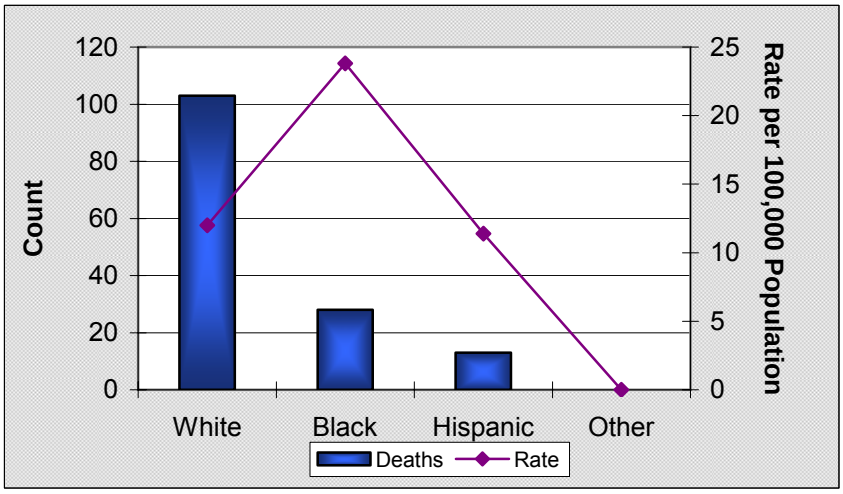
Figure 32. Nephritis, Nephrotic Syndrome, and Nephrosis Deaths by Gender, Tarrant County, 2005



Age-adjusted death rate standardized to 2000 population.
Data Source: Texas Department of State Health Services – Center for Vital Statistics

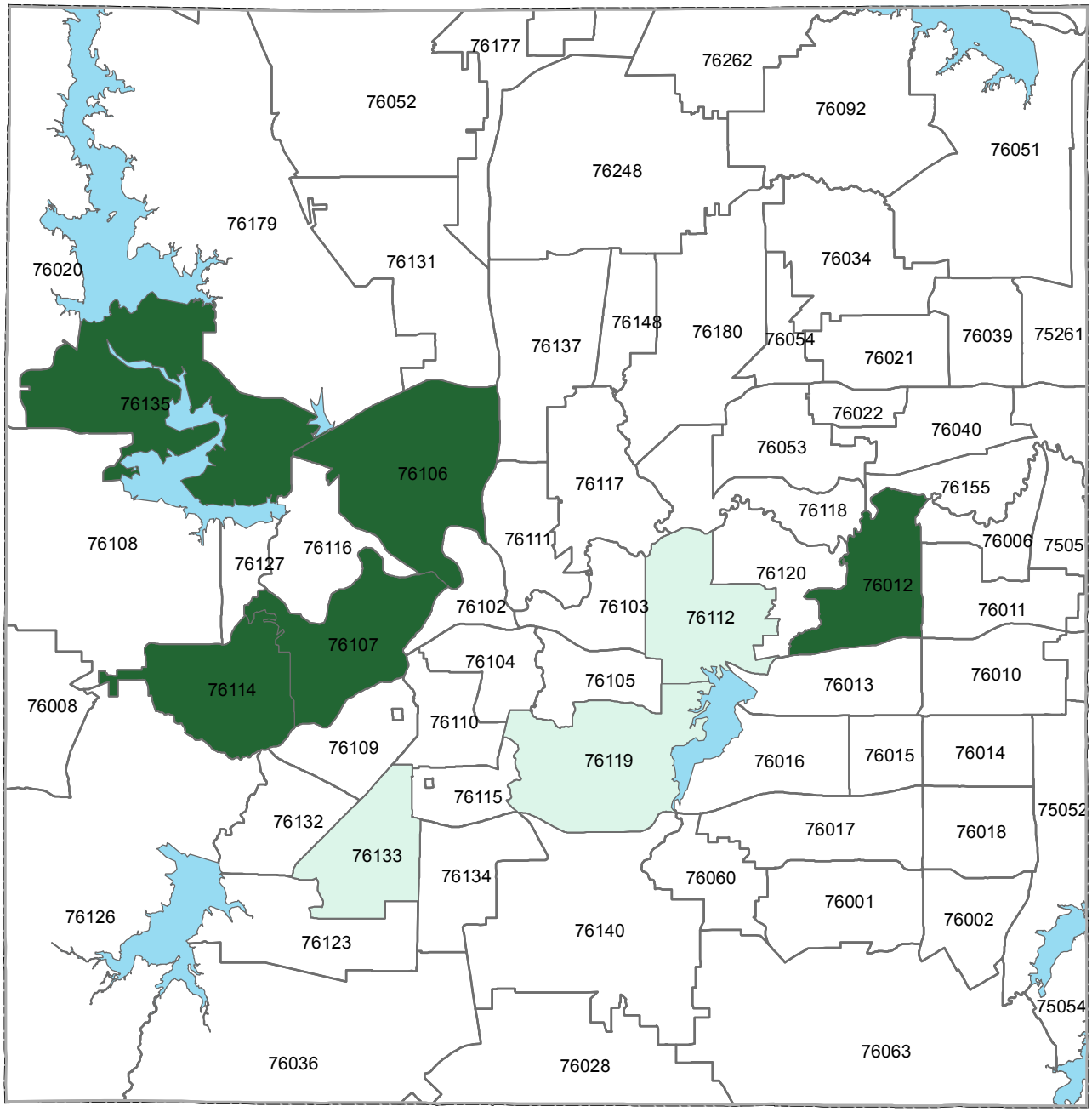
Among racial/ethnic groups, the highest age-adjusted death rate due to nephritis, nephrotic syndrome, and nephrosis was observed among Blacks. The rate among Blacks (28 deaths, 23.8 per 100,000 population) was twice that of Whites (103 deaths, 12.0 per 100,000 population) and Hispanics (13 deaths, 11.4 per 100,000 population). There were less than five deaths due to nephritis, nephritic syndrome, and nephrosis among Others (Figure 33).

Figure 33. Nephritis, Nephrotic Syndrome, and Nephrosis Deaths by Race/Ethnicity, Tarrant County, 2005



The numerator was too small for rate calculation among Others.
Age-adjusted death rate standardized to 2000 population.
Data Source: Texas Department of State Health Services – Center for Vital Statistics

Figure 34: Geographic Distribution of Nephritis, Nephrotic Syndrome, and Nephrosis Deaths by ZIP Code, Tarrant County, 2005



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Rate per 100,000

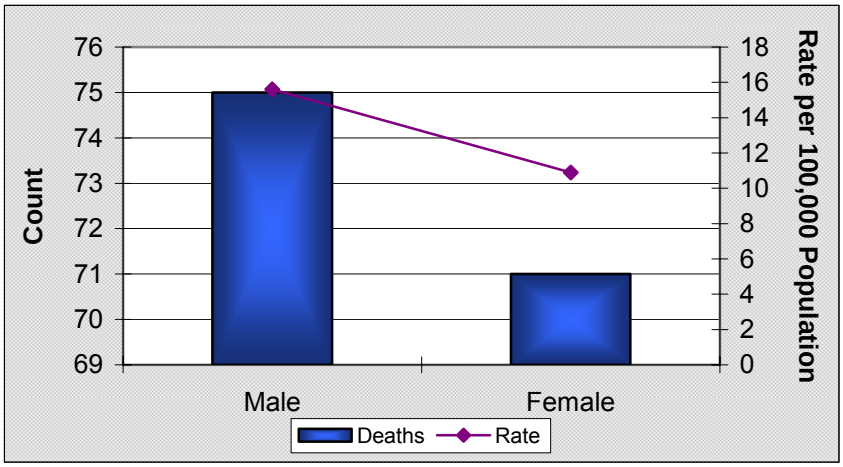
- 12.68 - 16.68
- 16.69 - 33.36
- No or Excluded Data
- Water
- County Boundary

GIS Geographic Information Systems TARRANT COUNTY Public Health

SEPTICEMIA

Overall, there were 146 deaths (an age-adjusted rate of 12.9 per 100,000 population) attributed to septicemia reported in Tarrant County for 2005. Death rates among males (75 deaths, 15.6 per 100,000 population) were forty percent higher than rates among females (71 deaths, 10.9 per 100,000 population) (Figure 35).

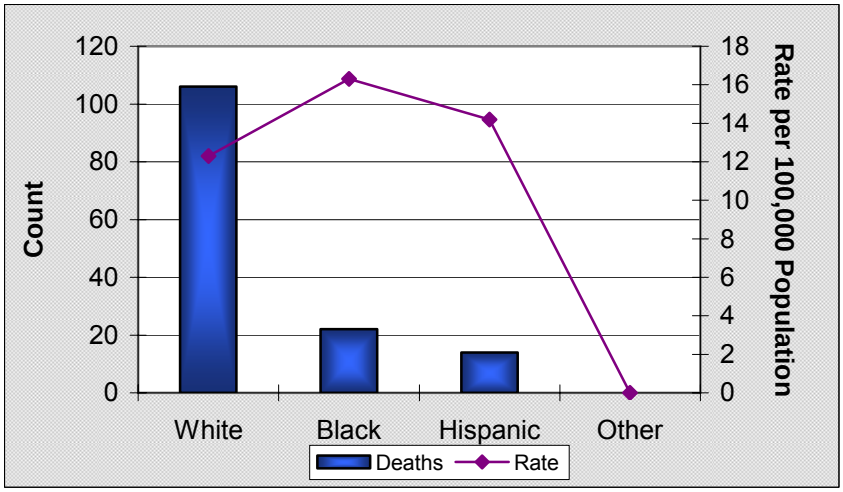
Figure 35. Septicemia Deaths by Gender, Tarrant County, 2005



Age-adjusted death rate standardized to 2000 population.
Data Source: Texas Department of State Health Services – Center for Vital Statistics

Among racial/ethnic groups, the highest age-adjusted death rate due to septicemia was observed among Blacks. The rate among Blacks (22 deaths, 16.3 per 100,000 population) was thirty percent higher than that of Whites (106 deaths, 12.3 per 100,000 population) and only slightly higher than that of Hispanics (14 deaths, 14.2 per 100,000 population). There were less than five deaths due to septicemia among Others (Figure 36). A geographic distribution of septicemia deaths is not included due to data limitations.

Figure 36. Septicemia Deaths by Race/Ethnicity, Tarrant County, 2005



The numerator was too small for rate calculation among Others.
Age-adjusted death rate standardized to 2000 population.
Data Source: Texas Department of State Health Services – Center for Vital Statistics

LIMITATIONS[1]

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 of death 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.

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

[1]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

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