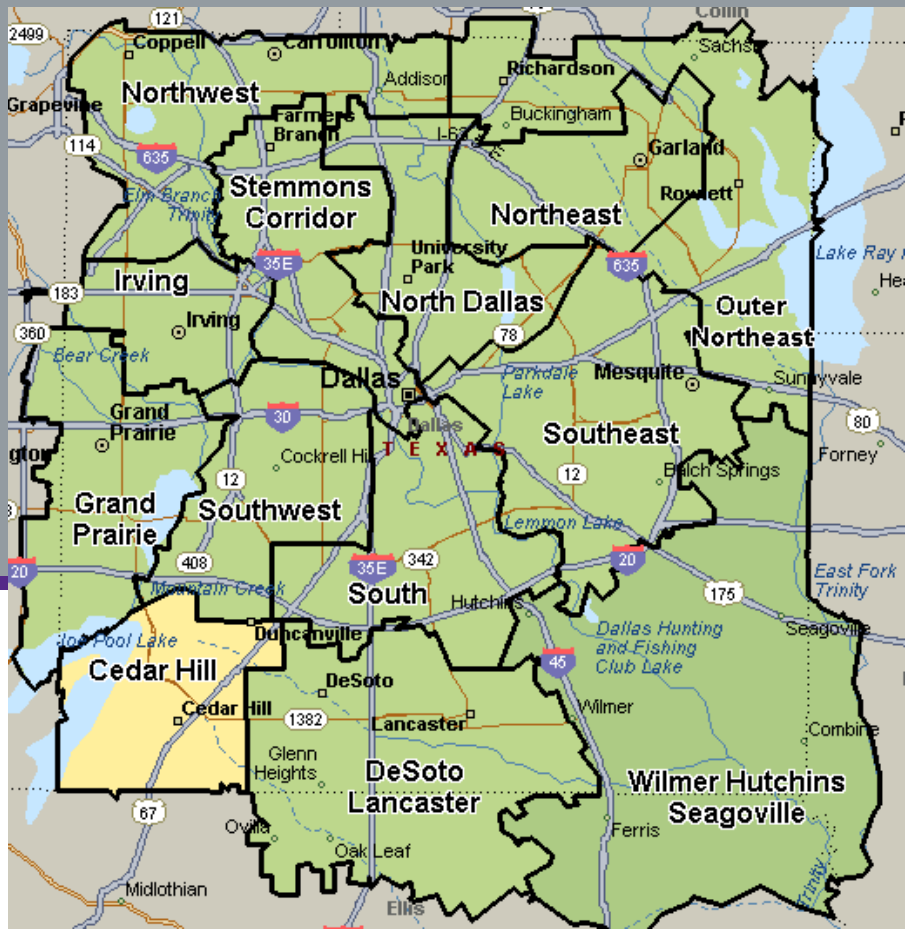
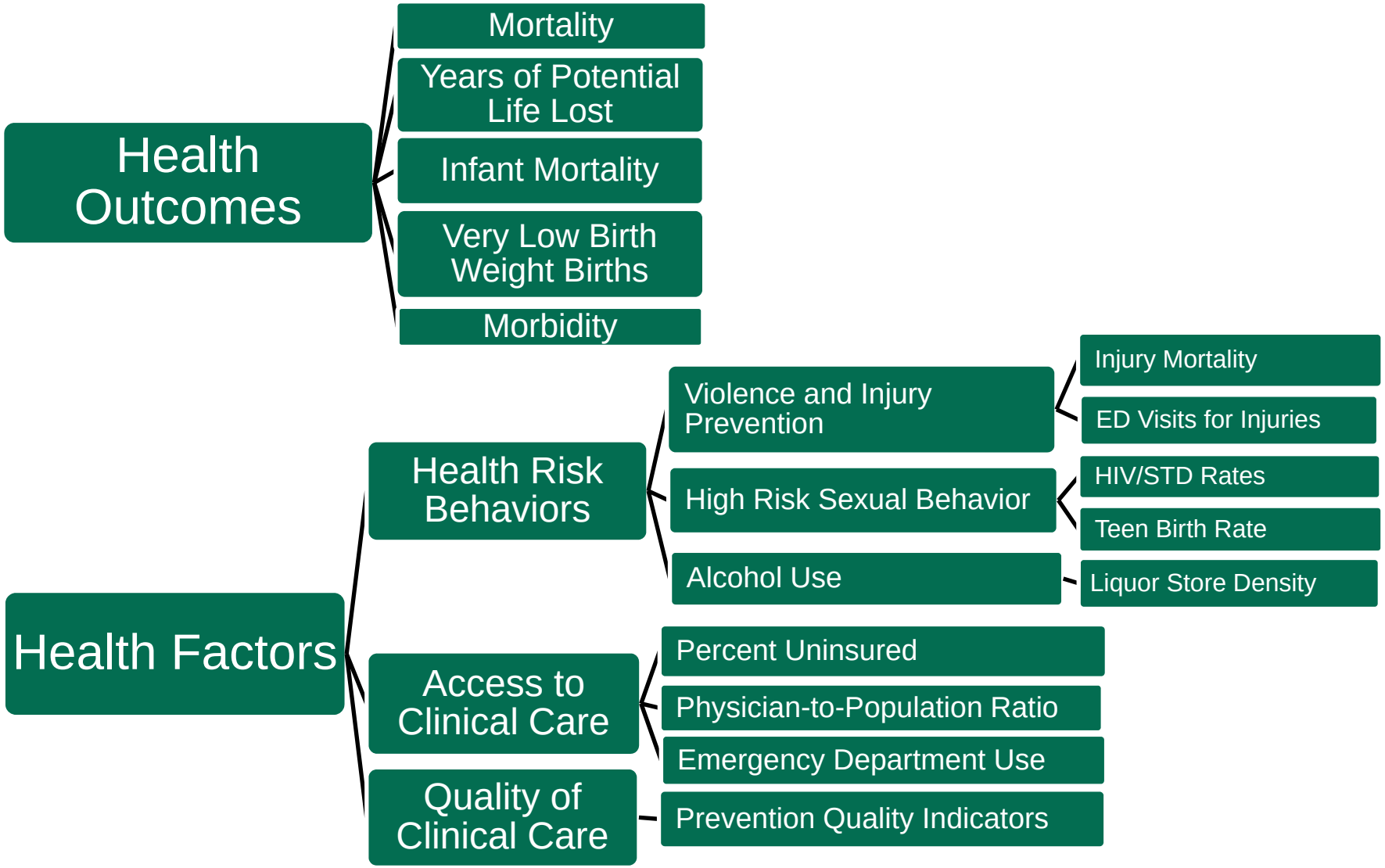
Community Health Assessment

Cedar Hill Service Area



Parkland

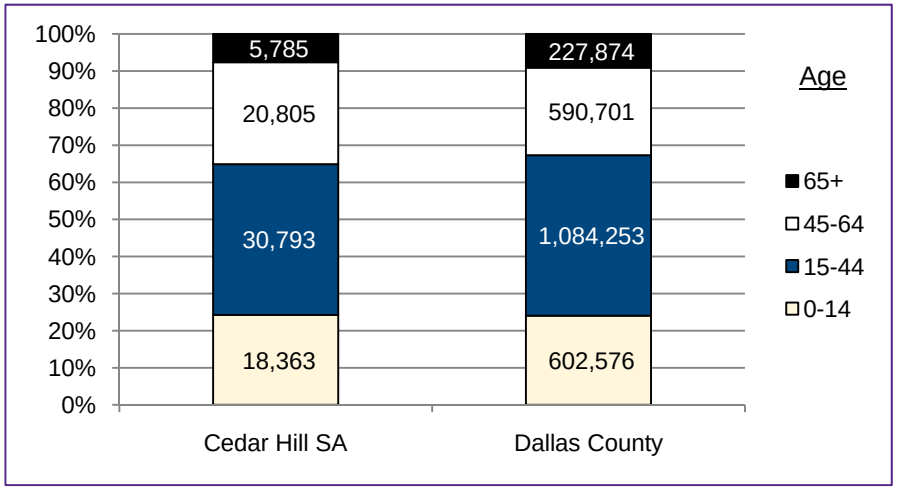
Organizational Model For the Community Health Dashboard

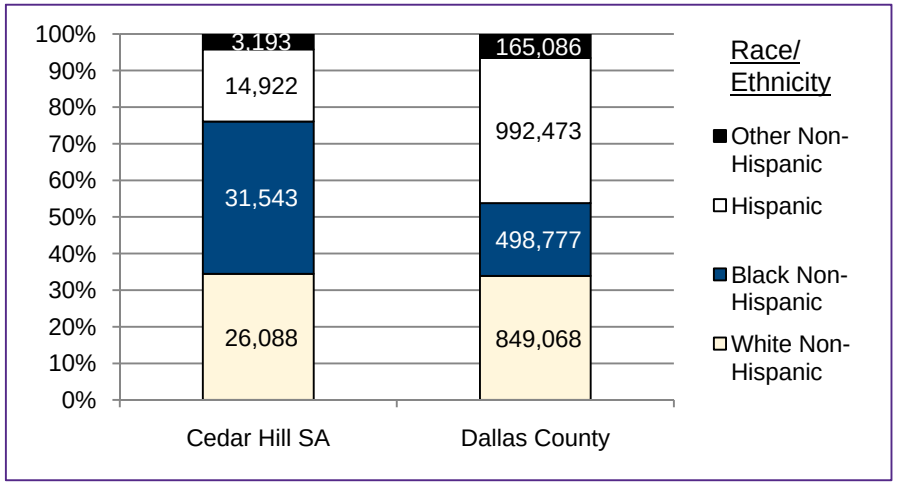


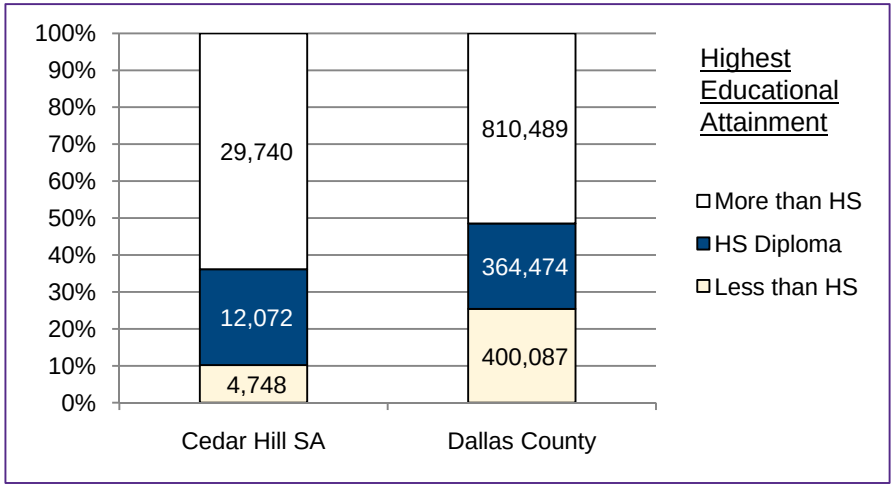
Demographic Profile

Cedar Hill Service Area

- **The population of the Cedar Hill Service Area is somewhat younger than the county population.**
- **The Service Area population has a lower percentage of Hispanics (19.7%) and a higher percentage of African Americans (41.6%) compared with the county (39.6% and 19.9% respectively).**
- **Cedar Hill also has a larger percentage of people with education beyond a high school diploma than Dallas County as a whole.**





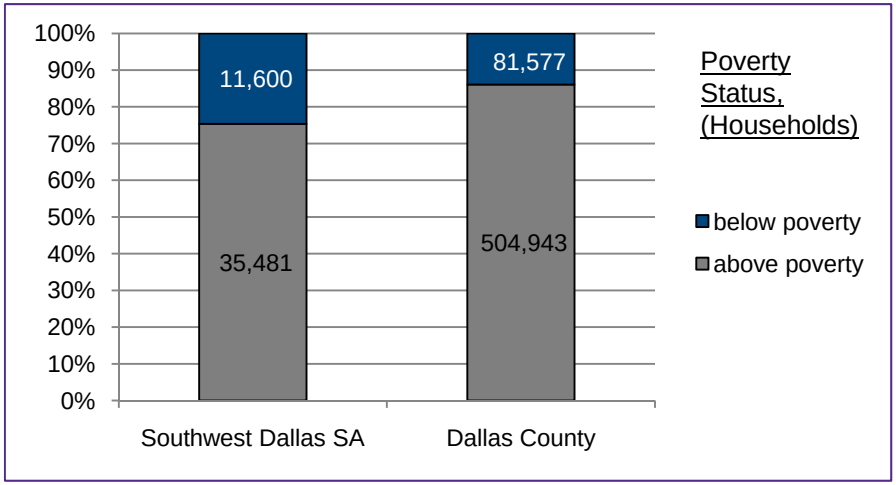


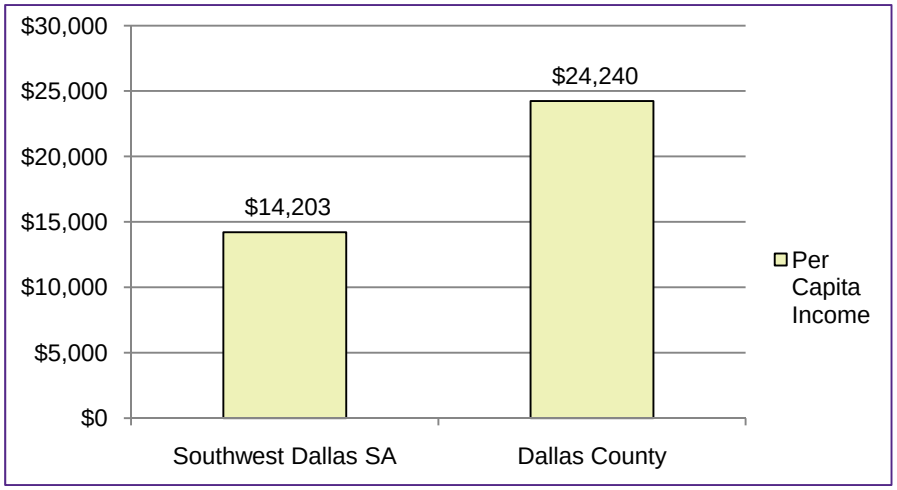
Source: Nielson/Claritas, Inc. Pop-Facts mid-2010 version

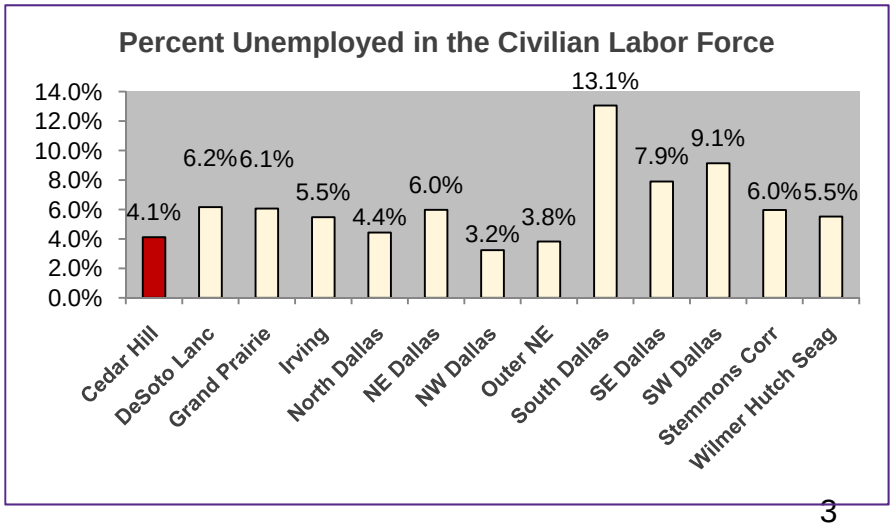
Demographic Profile

Cedar Hill Dallas Service Area

- **The population of the Cedar Hill Service Area has relatively fewer households in poverty.**
- **The Service Area's per capita income (PCI) is just above the county PCI; of the 13 service areas it is the 5th highest PCI.**
- **The percent unemployed for this Service Area is the 2nd best among the 13 Service Areas**



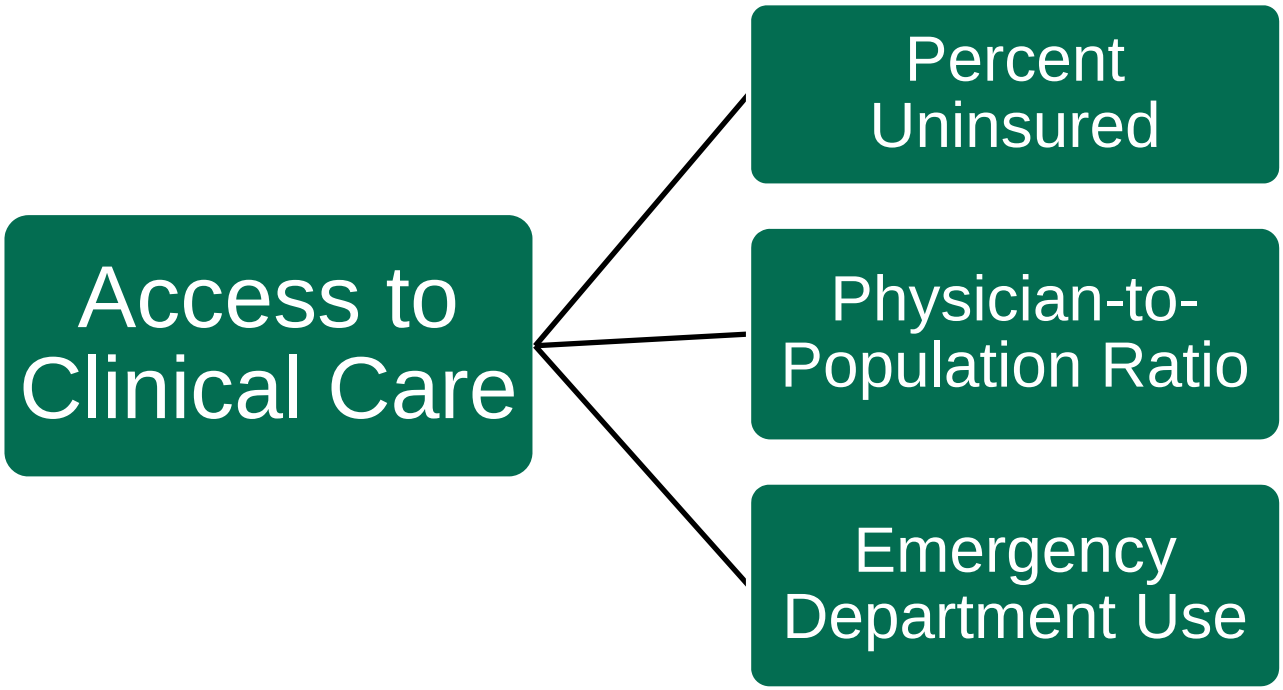




Source: Nielson/Claritas, Inc. Pop-Facts mid-2010 version

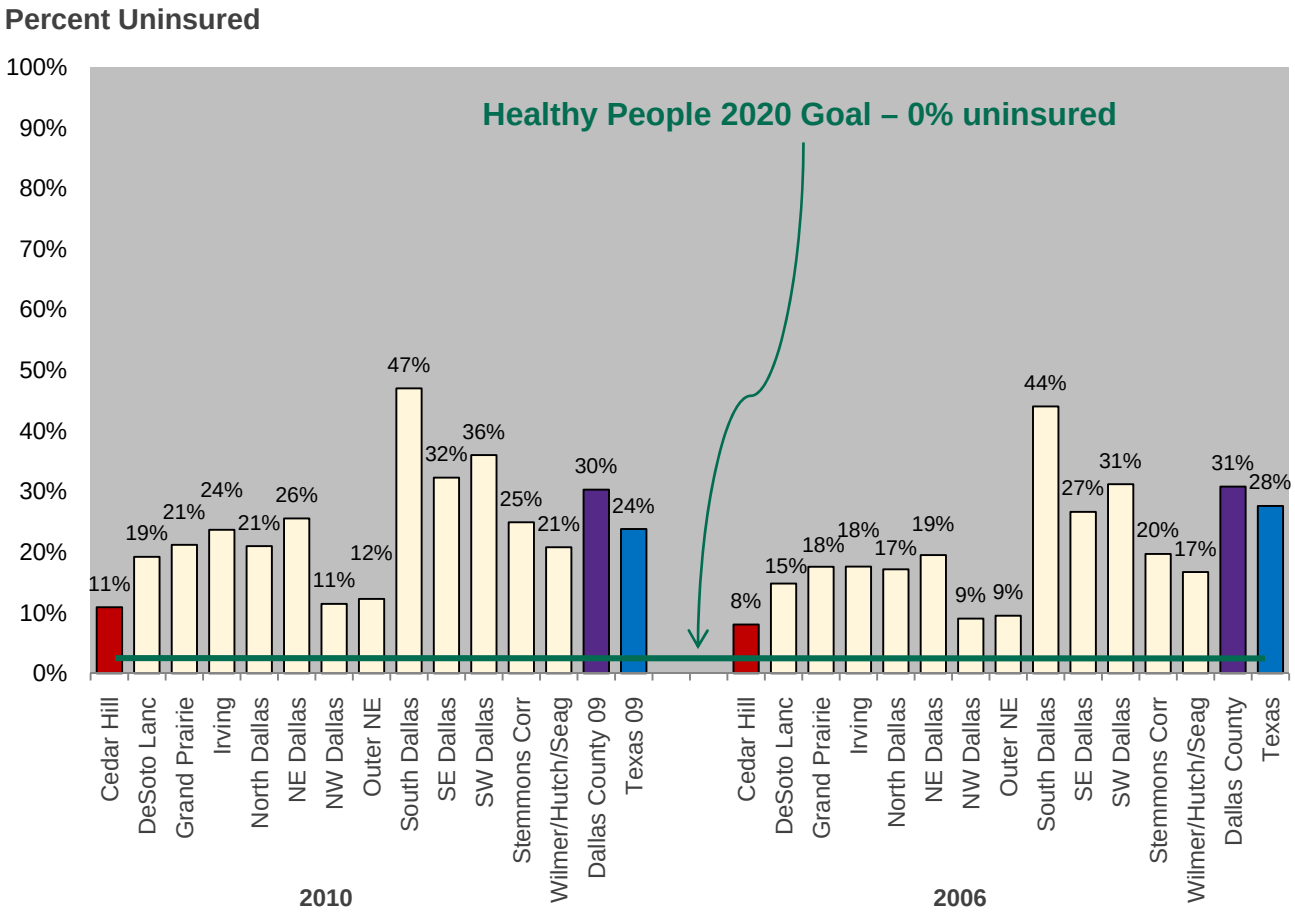
Parkland

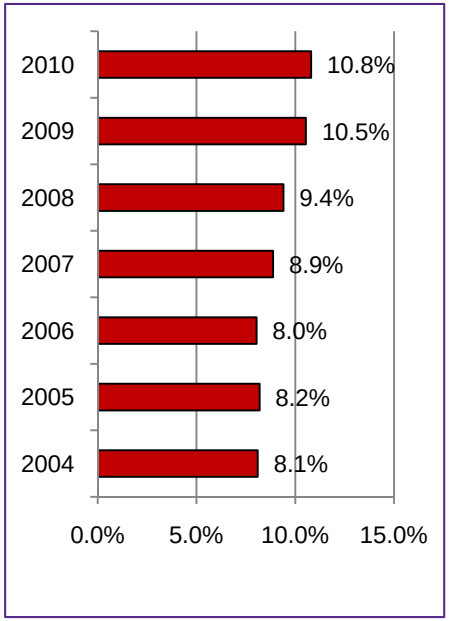
Access to care



Access to Healthcare: Percent Without Healthcare Insurance

Cedar Hill Service Area



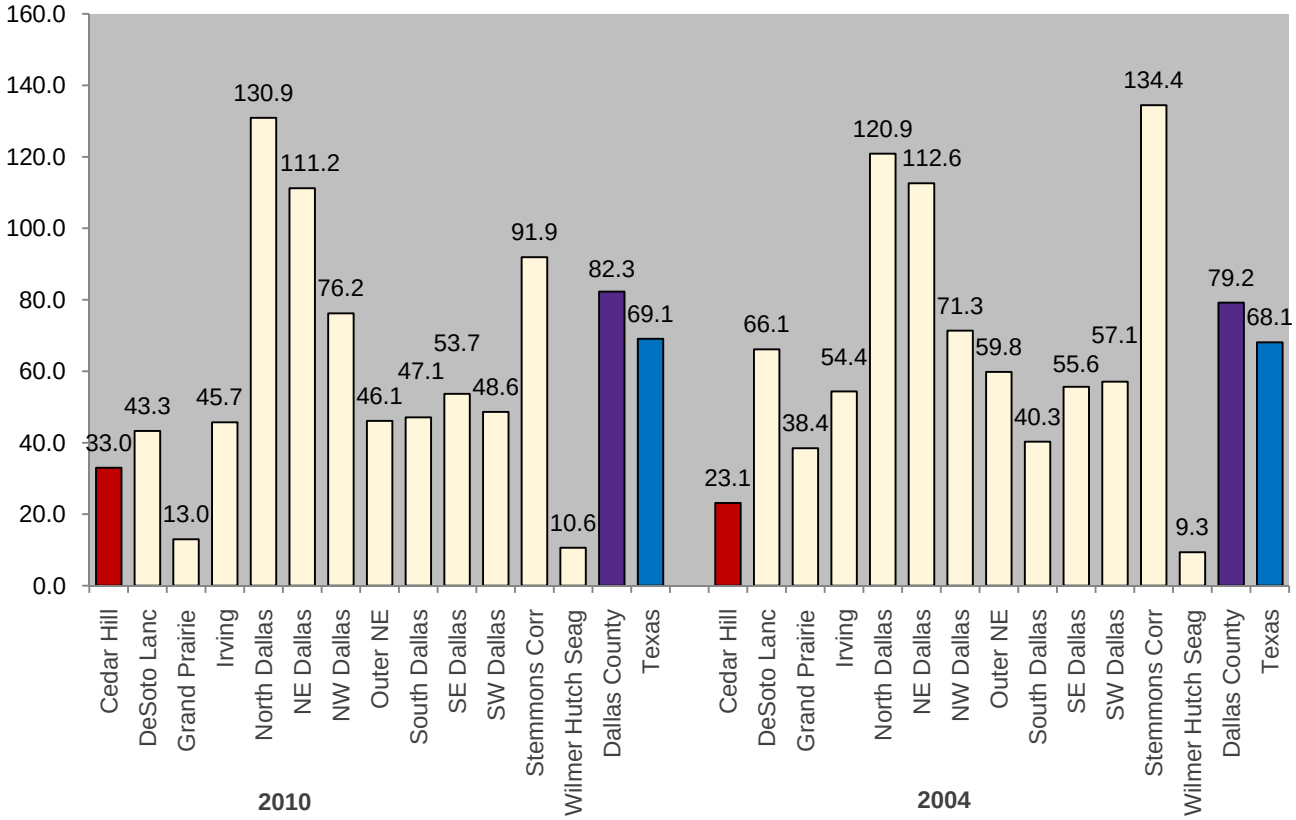


Source: 2006 Solucient, Inc.; 2010 Market Planner Plus; Denominator population data from Claritas, Inc.; except 2010 from Nielson/Claritas, Inc. Pop-Facts mid 2010 version. Dallas County and Texas rates from US Census Bureau's American Community Survey 2009

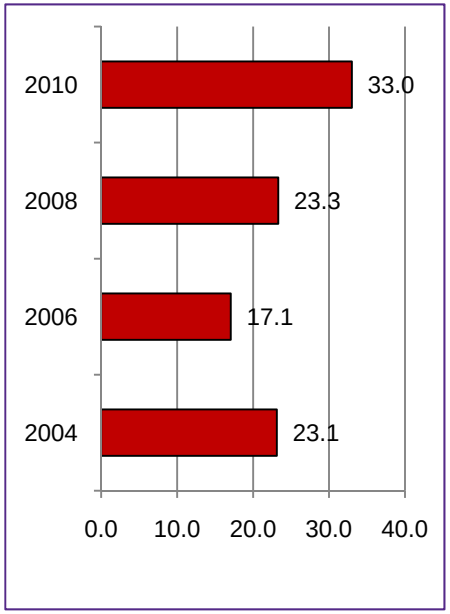
Access to Healthcare: Primary Care Physician-to-Population Ratio

Cedar Hill Service Area

Primary Care Physicians per 100,000



Primary Care Physician-to-Population Ratio, per 100,000, Cedar Hill Service Area



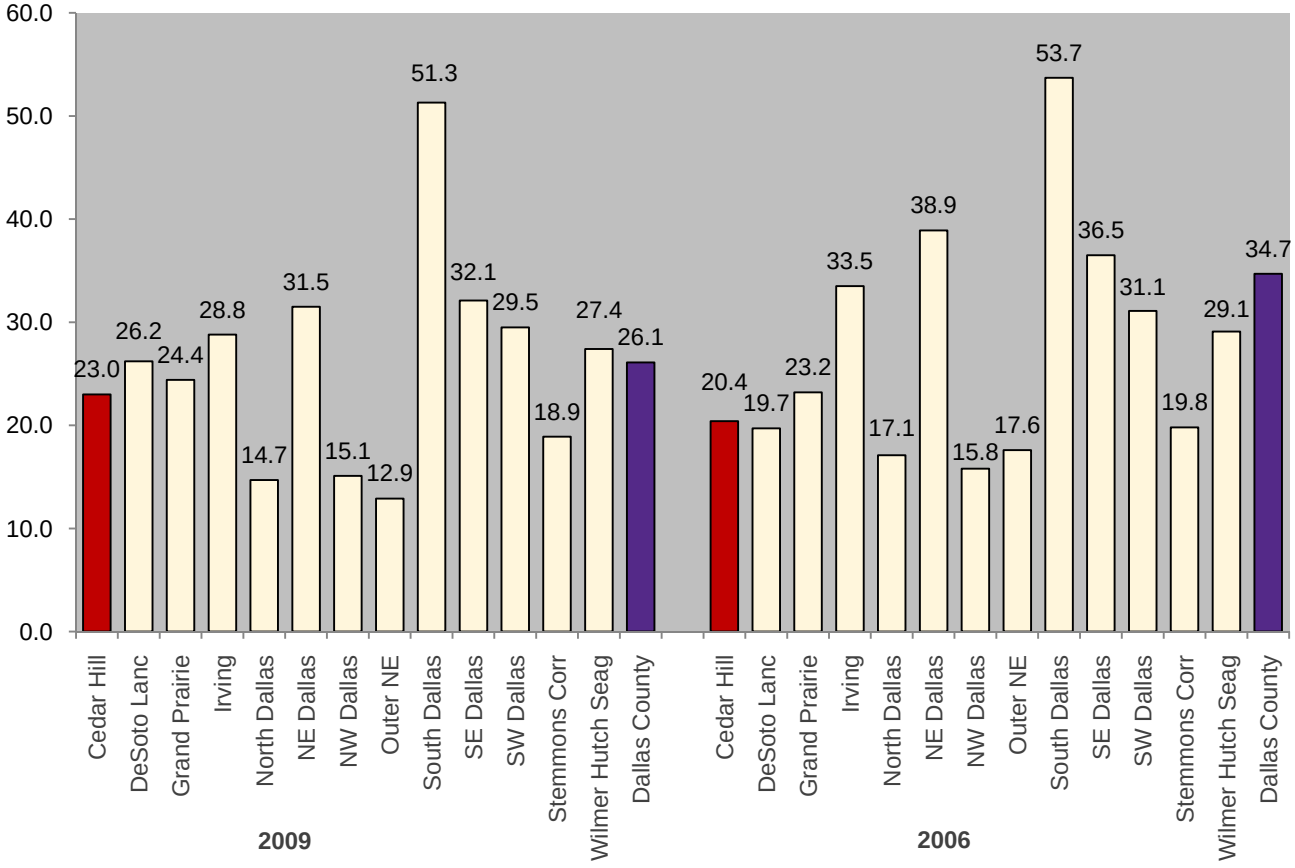
Source: Texas Medical Association Physician Practice Address files; denominator population data from Claritas, Inc., except 2010 from Nielson/Claritas Pop Facts mid 2010 version.
County and State sources is Texas Bureau of Primary Care. http://www.dshs.state.tx.us/chs/hprc/tables/Primary-Care-Physicians-(PC)-by-County-of-Practice---September,-2010/ and http://www.dshs.state.tx.us/chs/hprc/tables/04PC.shtm

NOTE: No Healthy People 2020 goal matches this metric.

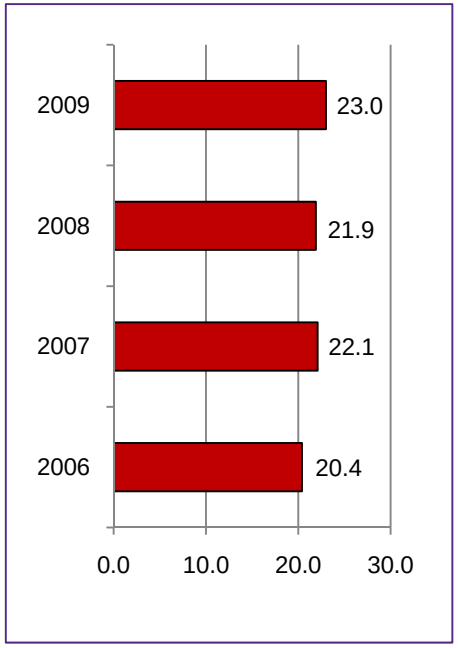
Access to Healthcare: Non-Emergent ED Utilization

Cedar Hill Service Area

Non-Emergent ED Visits, per 1,000 Population



Rate of Non-Emergent ED Visits, per 1,000, Cedar Hill Service Area

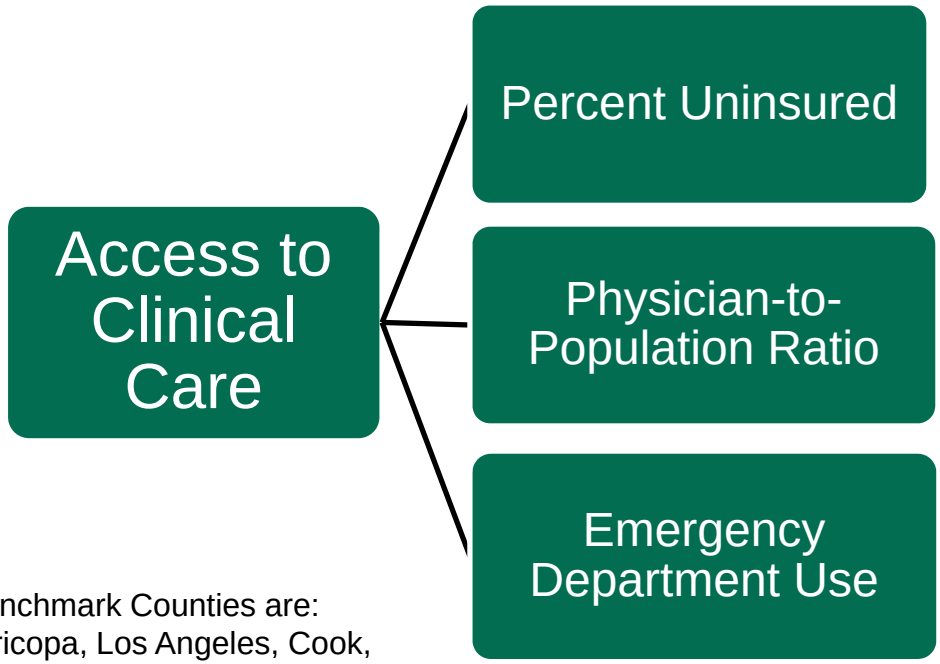


NOTE: No Healthy People 2020 goal matches this metric.

Source: DFWHC, Outpatient Data System; NYU Algorithm for determining appropriate Emergency Dept. Use; denominator population data from Claritas, Inc.

Access to Care

– Doing better than the benchmark
– Same as/not significantly different from the benchmark
– Worse than the benchmark

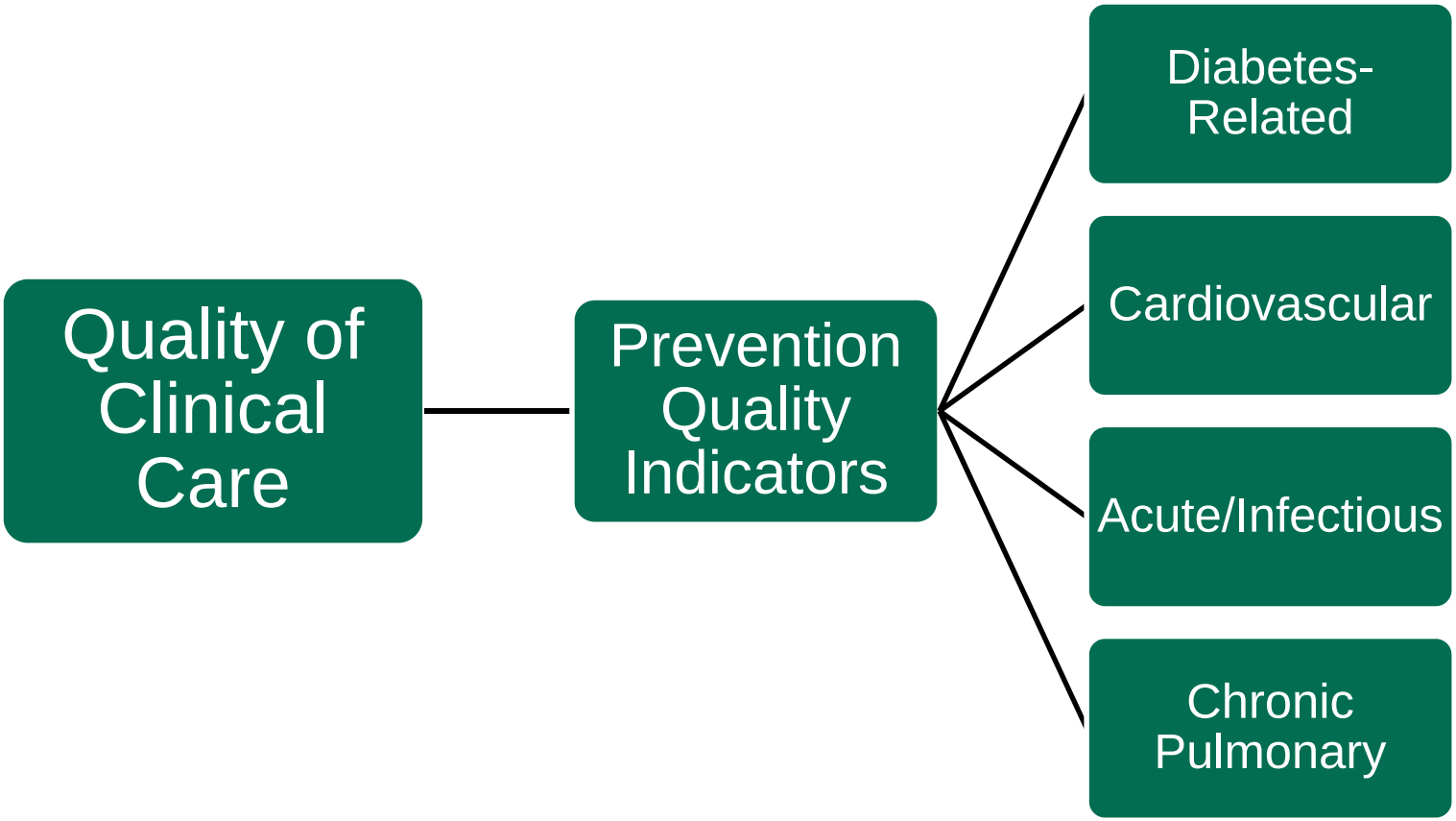


Cedar Hill Compared to Healthy People 2020 Goal	Cedar Hill Compared to Benchmark Counties* (Quartiles)	Cedar Hill Compared to Past Years' Data (CI)
N/A		
N/A	N/A	

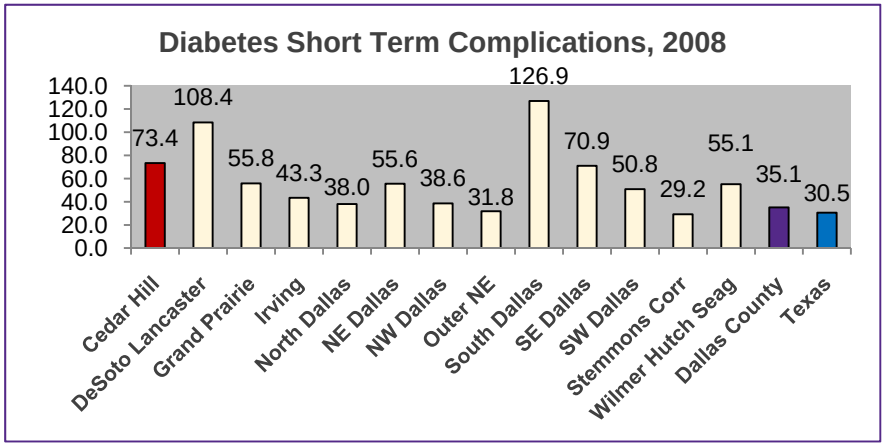
*Benchmark Counties are: Maricopa, Los Angeles, Cook, Miami-Dade, Bexar, Harris and Tarrant

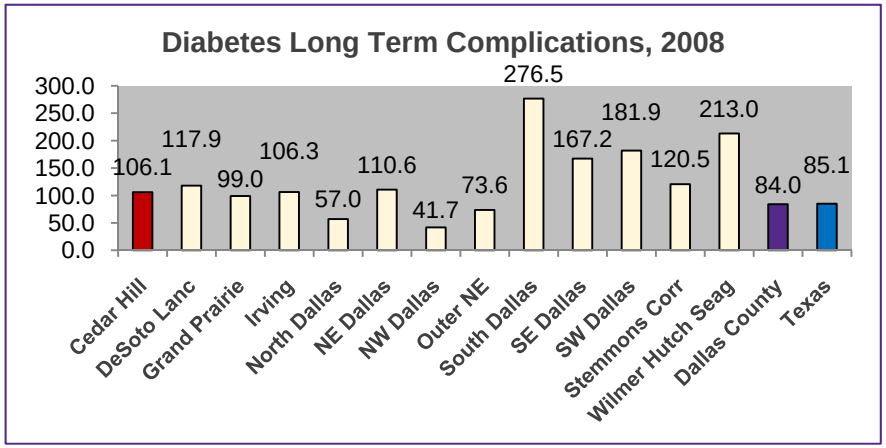
Parkland

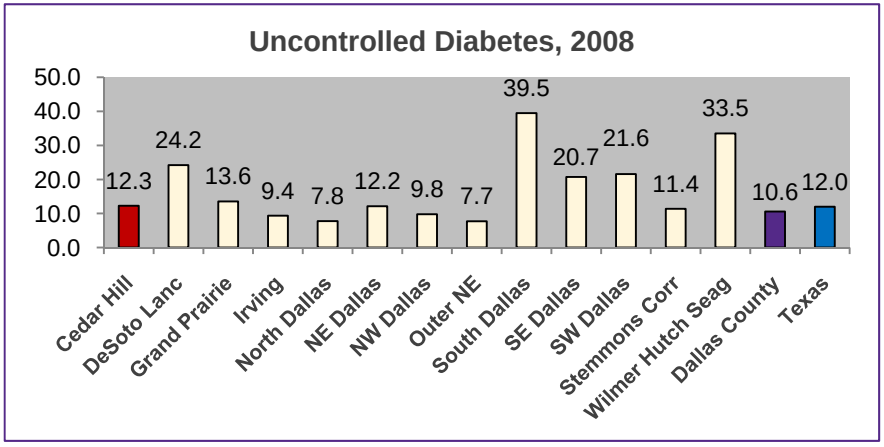
Quality of care

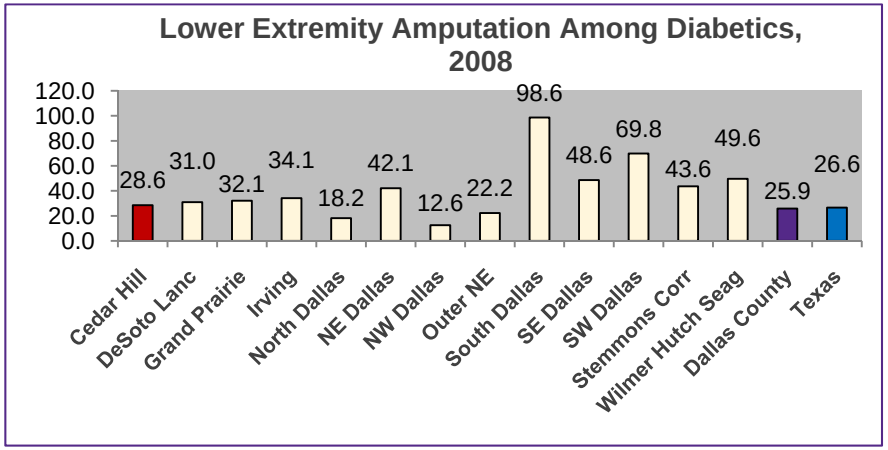


Healthcare Quality: Rate of Preventable Hospitalizations, 2008
Diabetes-Related Hospitalizations
Cedar Hill Service Area



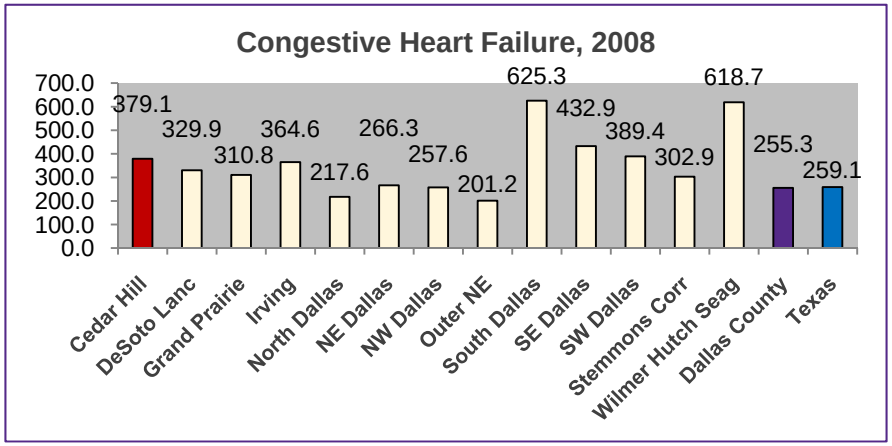


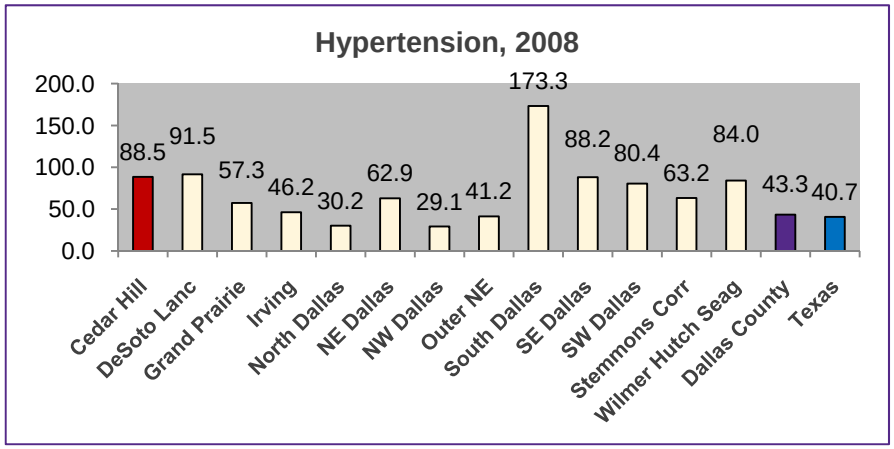


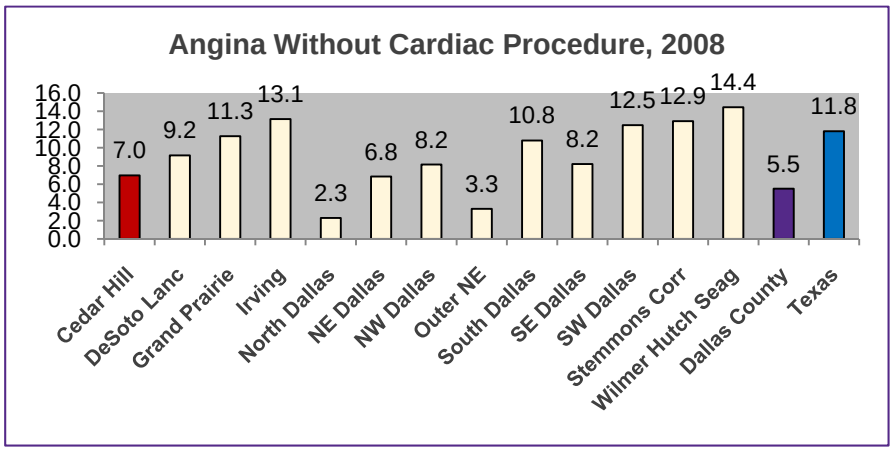


Source: Texas Department of State Health Services, Texas Health Care Information Council, unpublished data; denominator population data from Claritas, Inc.; County and State rates from Texas Department of State Health Services, Texas Health Care Information Council, 2003, 2005 and 2008

Healthcare Quality: Rate of Preventable Hospitalizations, 2008
Cardiovascular Disease Hospitalizations
Cedar Hill Service Area

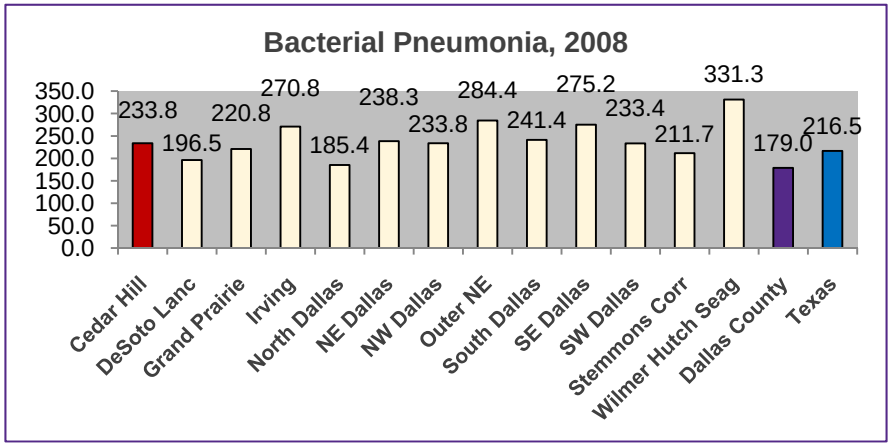


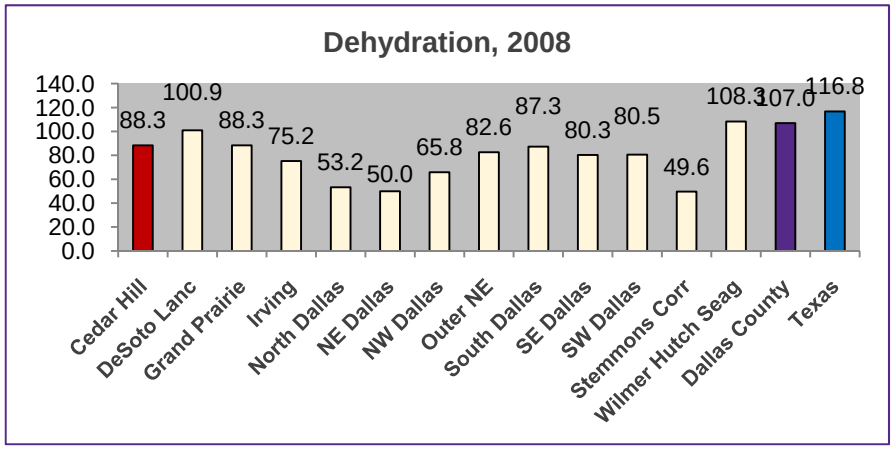


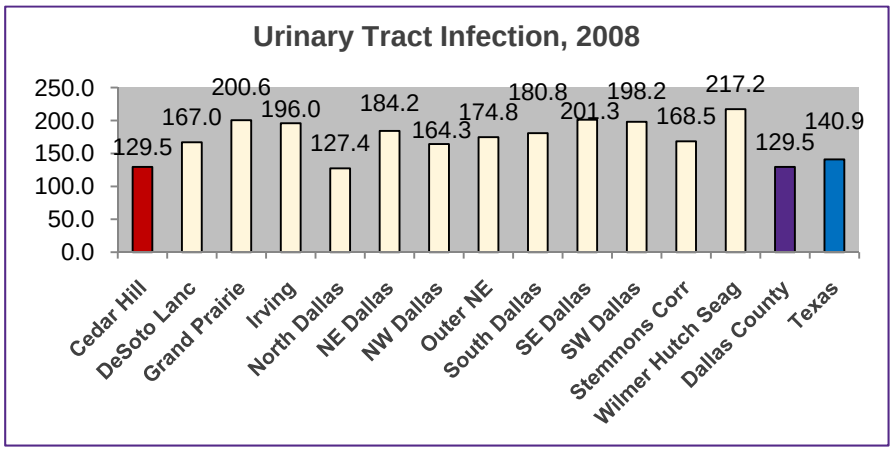


Source: Texas Department of State Health Services, Texas Health Care Information Council, unpublished data; denominator population data from Claritas, Inc.; County and State rates from Texas Department of State Health Services, Texas Health Care Information Council, 2003, 2005 and 2008

Healthcare Quality: Rate of Preventable Hospitalizations, 2008
Acute/Infectious Disease Hospitalizations
Cedar Hill Service Area





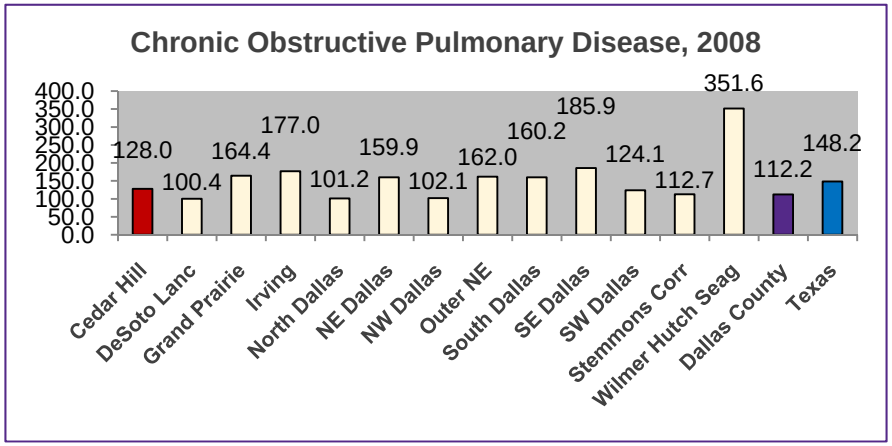


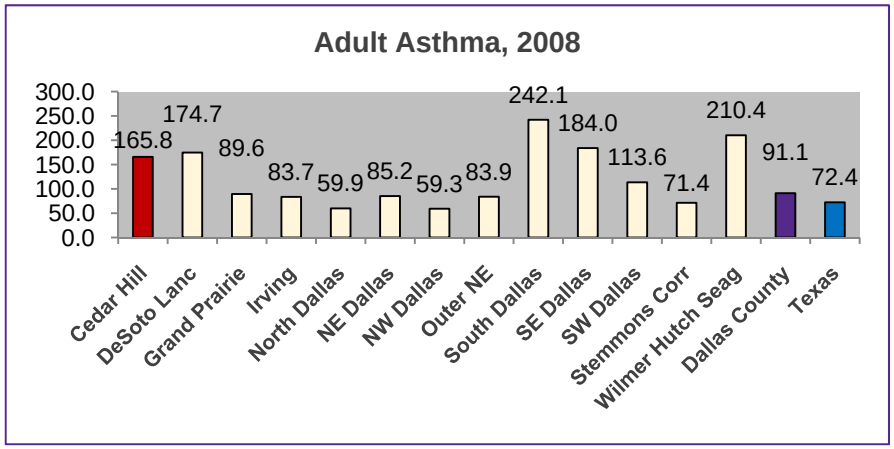
Source: Texas Department of State Health Services, Texas Health Care Information Council, unpublished data; denominator population data from Claritas, Inc.; County and State rates from Texas Department of State Health Services, Texas Health Care Information Council, 2003, 2005 and 2008

Healthcare Quality: Rate of Preventable Hospitalizations, 2008

Chronic Pulmonary Disease Hospitalizations

Cedar Hill Service Area

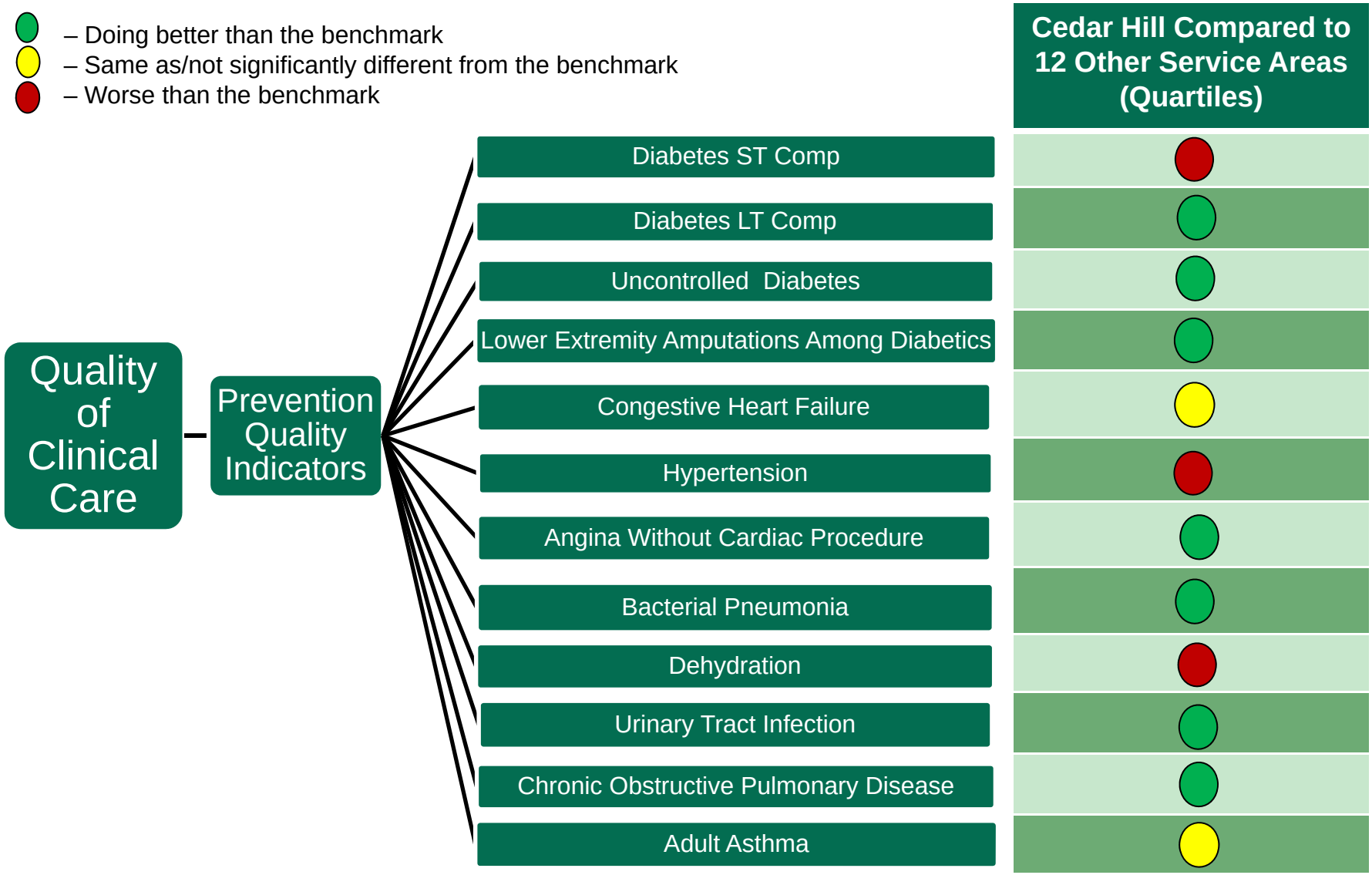




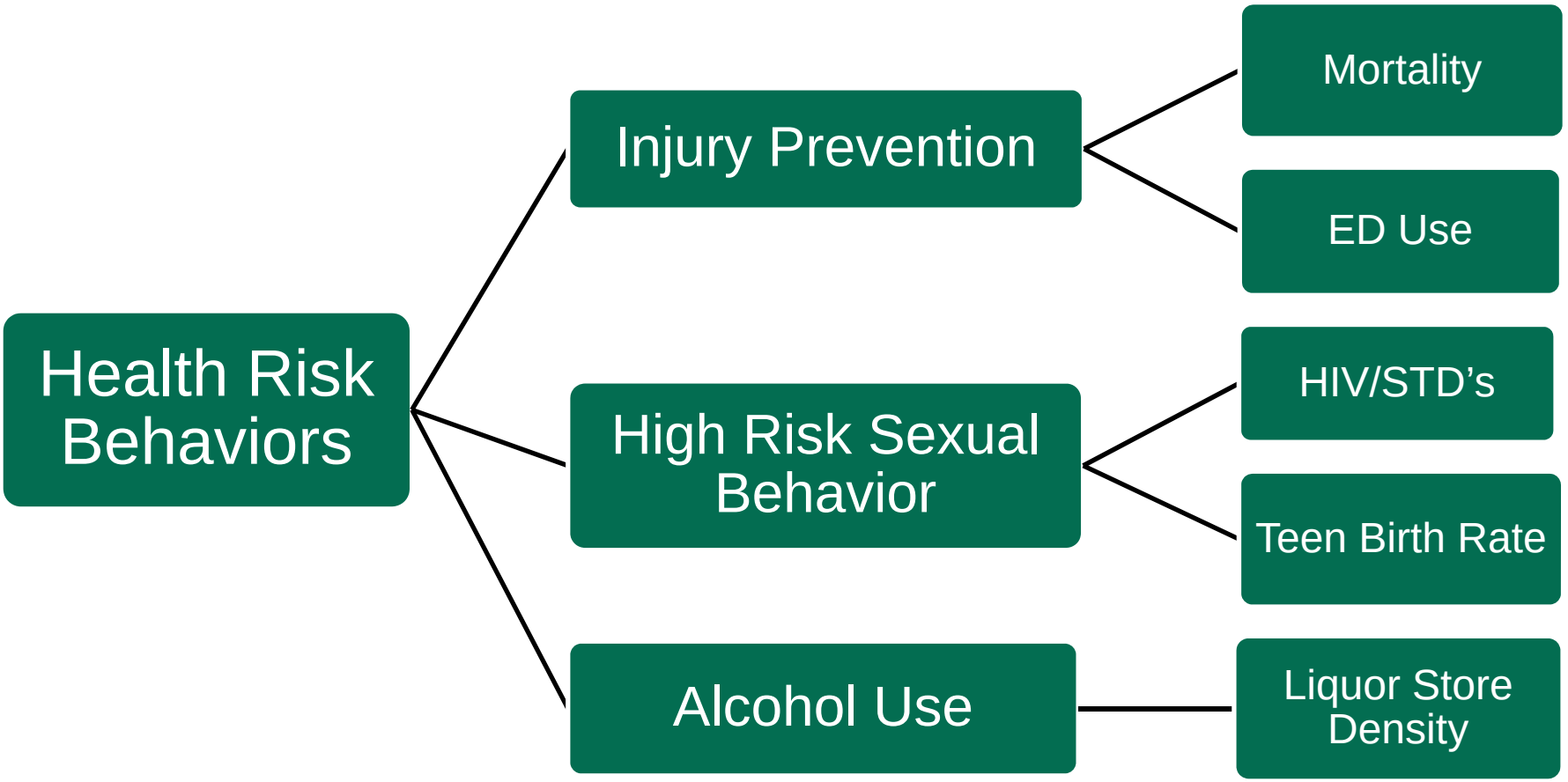
Source: Texas Department of State Health Services, Texas Health Care Information Council, unpublished data; denominator population data from Claritas, Inc.; County and State rates from Texas Department of State Health Services, Texas Health Care Information Council, 2003, 2005 and 2008

Healthcare Quality

– Doing better than the benchmark
– Same as/not significantly different from the benchmark
– Worse than the benchmark

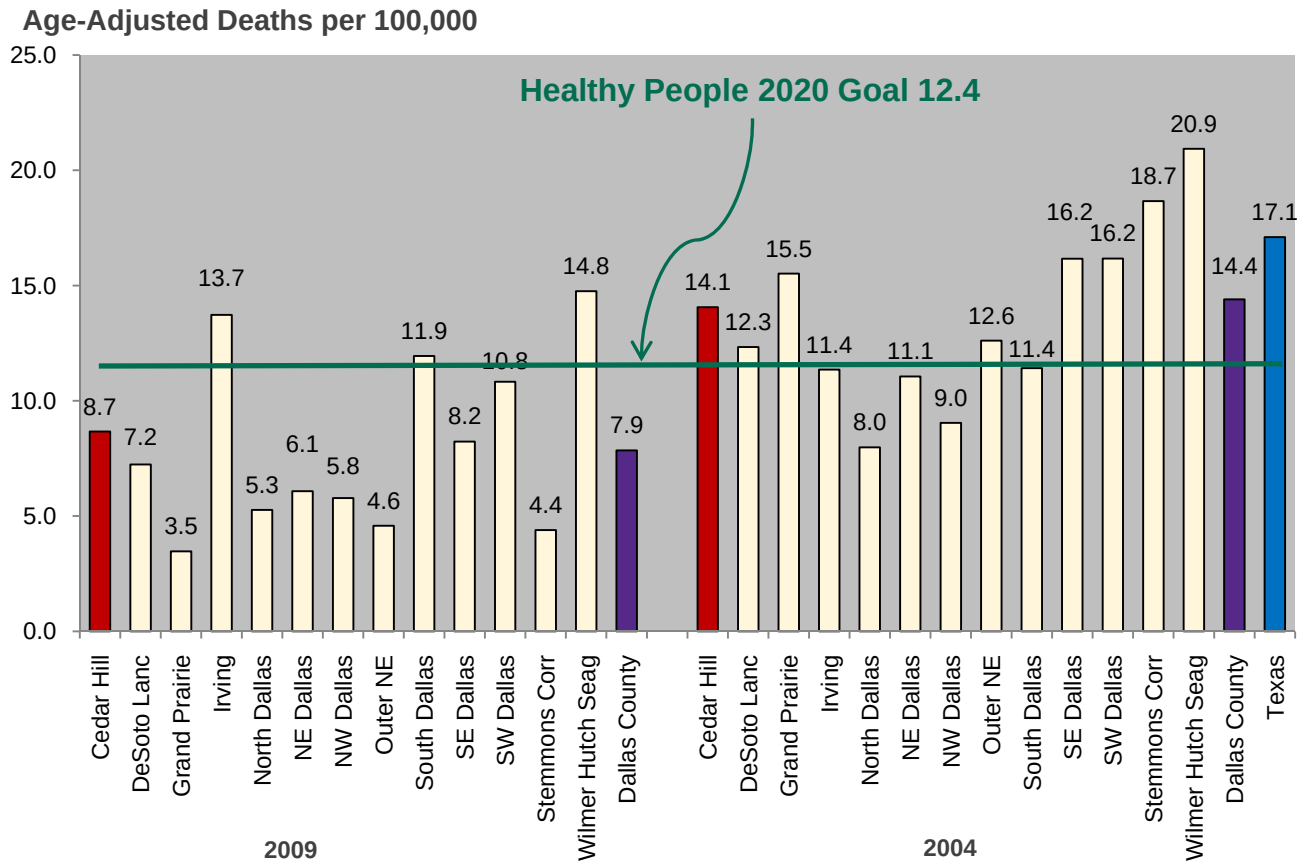


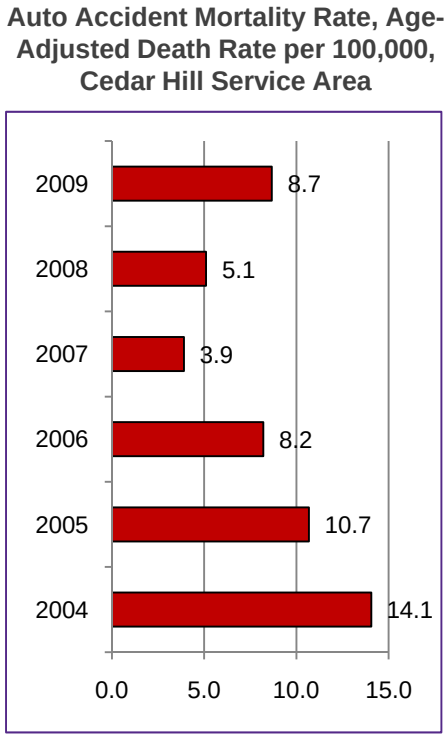
Health Risk Behaviors



Risk Factors: Auto Accident Mortality Rates

Cedar Hill Service Area

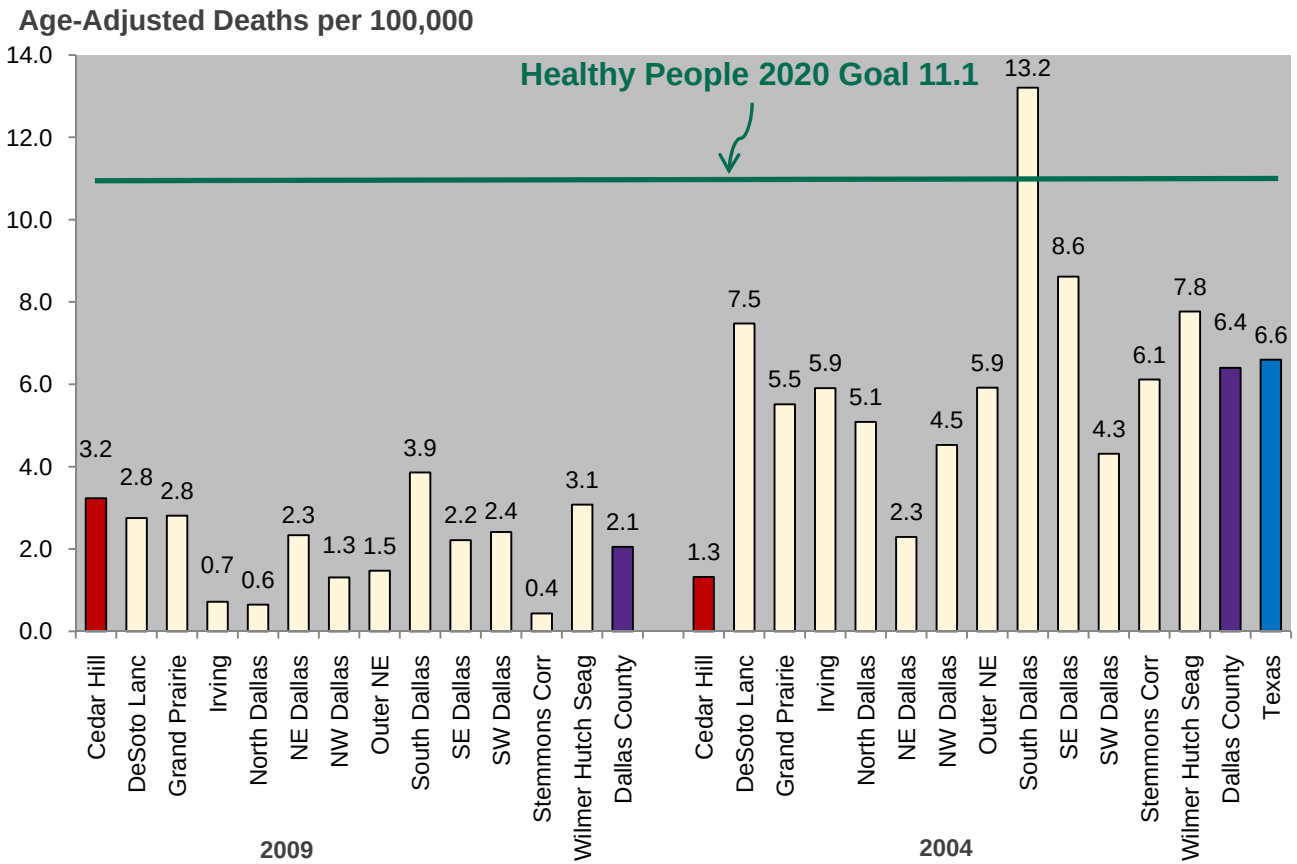


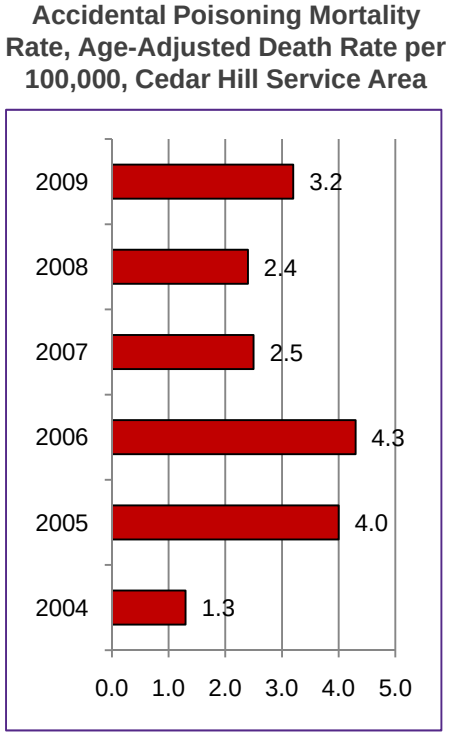


Source: Texas Department of State Health Services, Bureau of Vital Statistics; denominator population data from Claritas, Inc.

Risk Factors: Accidental Poisoning Mortality Rates

Cedar Hill Service Area

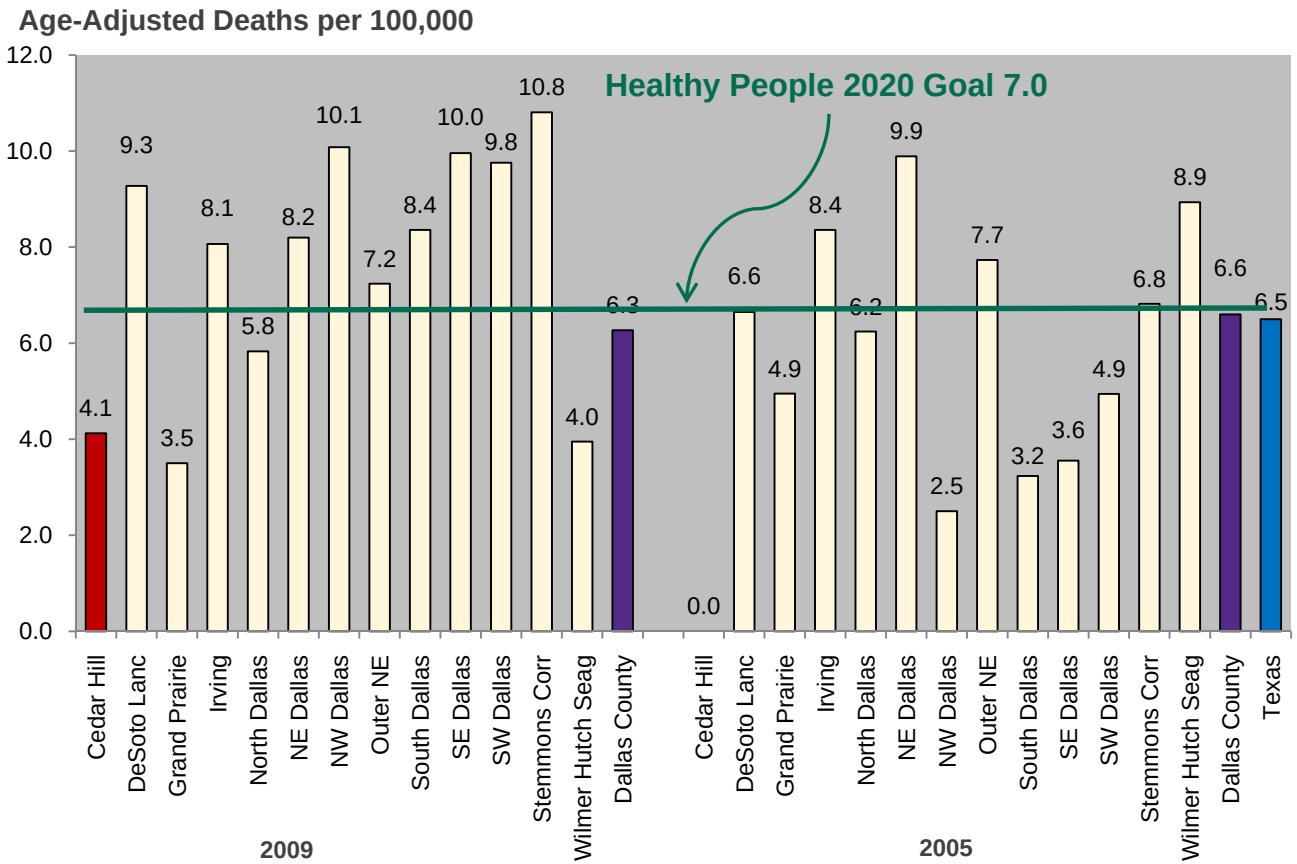


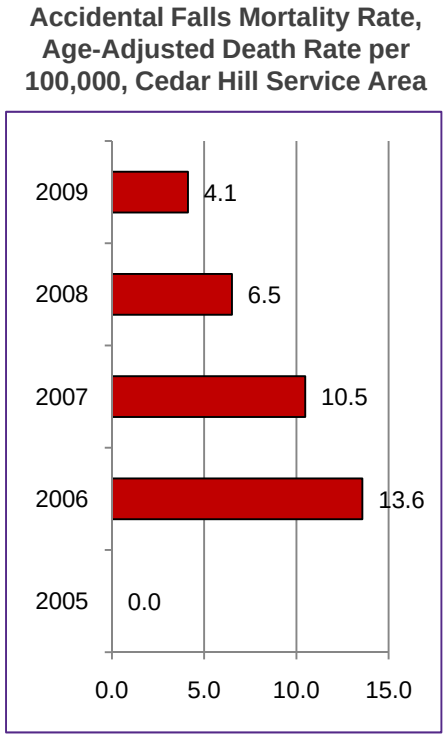


Source: Texas Department of State Health Services, Bureau of Vital Statistics; denominator population data from Claritas, Inc.

Risk Factors: Accidental Falls Mortality Rates

Cedar Hill Service Area



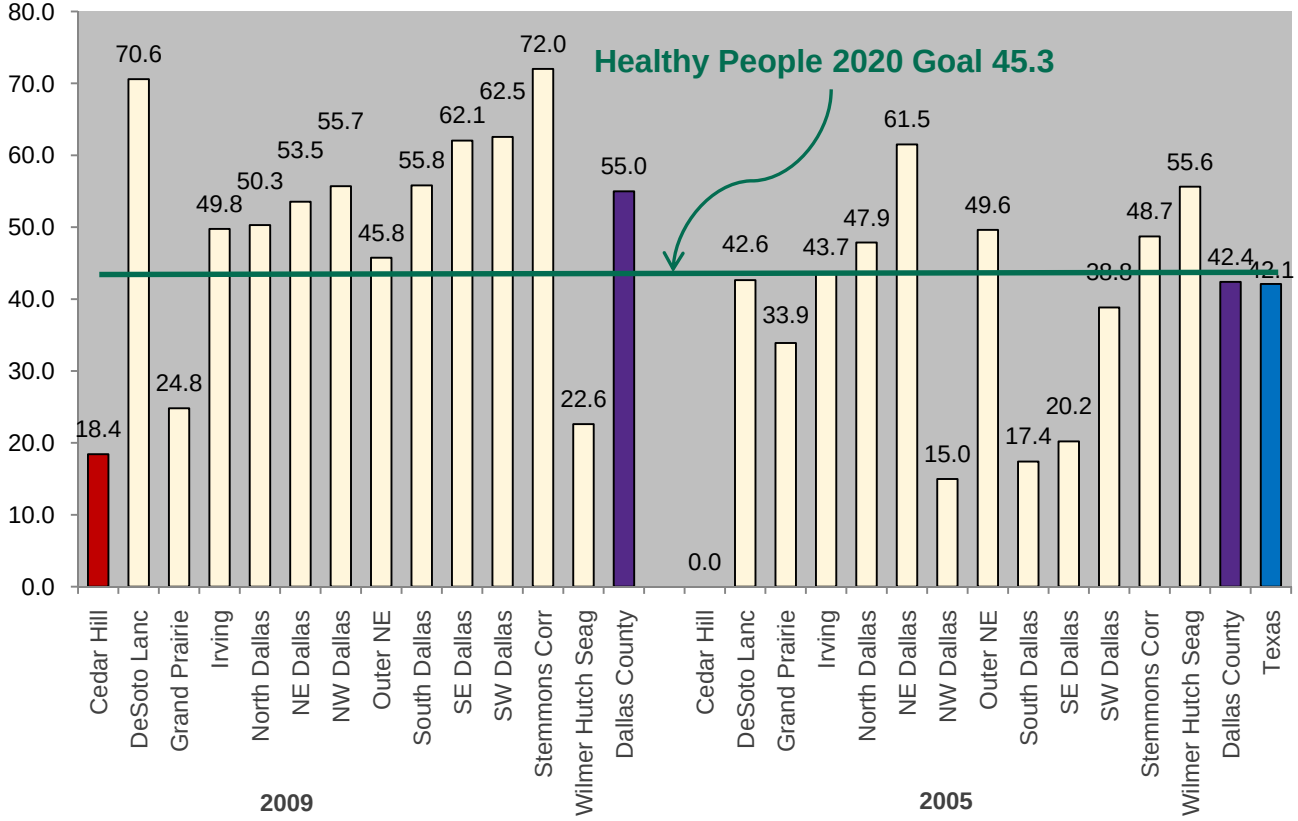


Source: Texas Department of State Health Services, Bureau of Vital Statistics; denominator population data from Claritas, Inc.

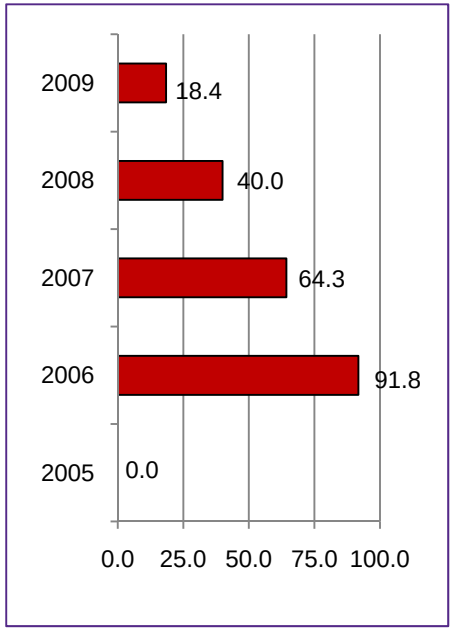
Risk Factors: Falls Death Rates Among Seniors

Cedar Hill Service Area

Falls Deaths Age 65+



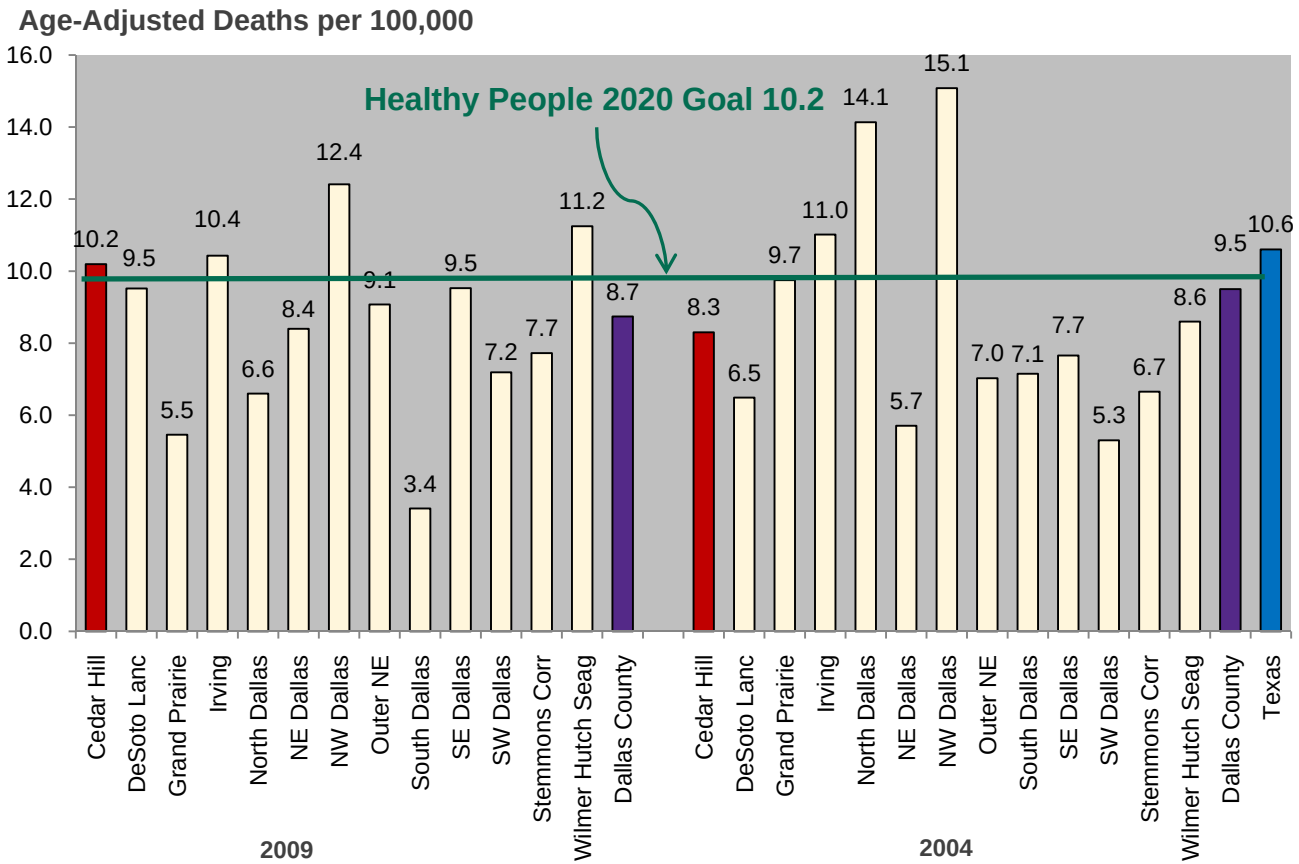
Falls fatality rates, ages 65+, per 100,000, Cedar Hill Service Area

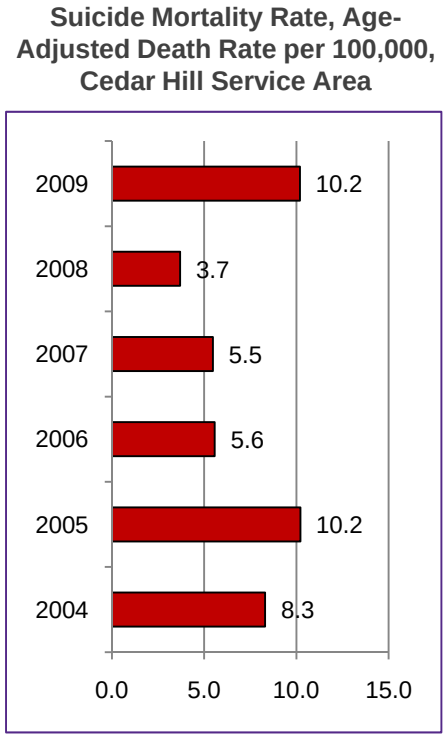


Source: Texas Department of State Health Services, Bureau of Vital Statistics, unpublished data; denominator population data from Claritas, Inc.; 2005 Dallas County data from Centers for Disease Control and Prevention, National Center for Health Statistics. Multiple Cause of Death File 2005-2006. CDC WONDER On-line Database, compiled from Multiple Cause of Death File 2005-2006 Series 20 No. 2L, 2009. Accessed at http://wonder.cdc.gov/mcd-icd10.html on Mar 25, 2010 2:52:15 PM; 2005 Texas data from http://soupfin.tdh.state.tx.us/

Risk Factors: Suicide Mortality Rates

Cedar Hill Service Area

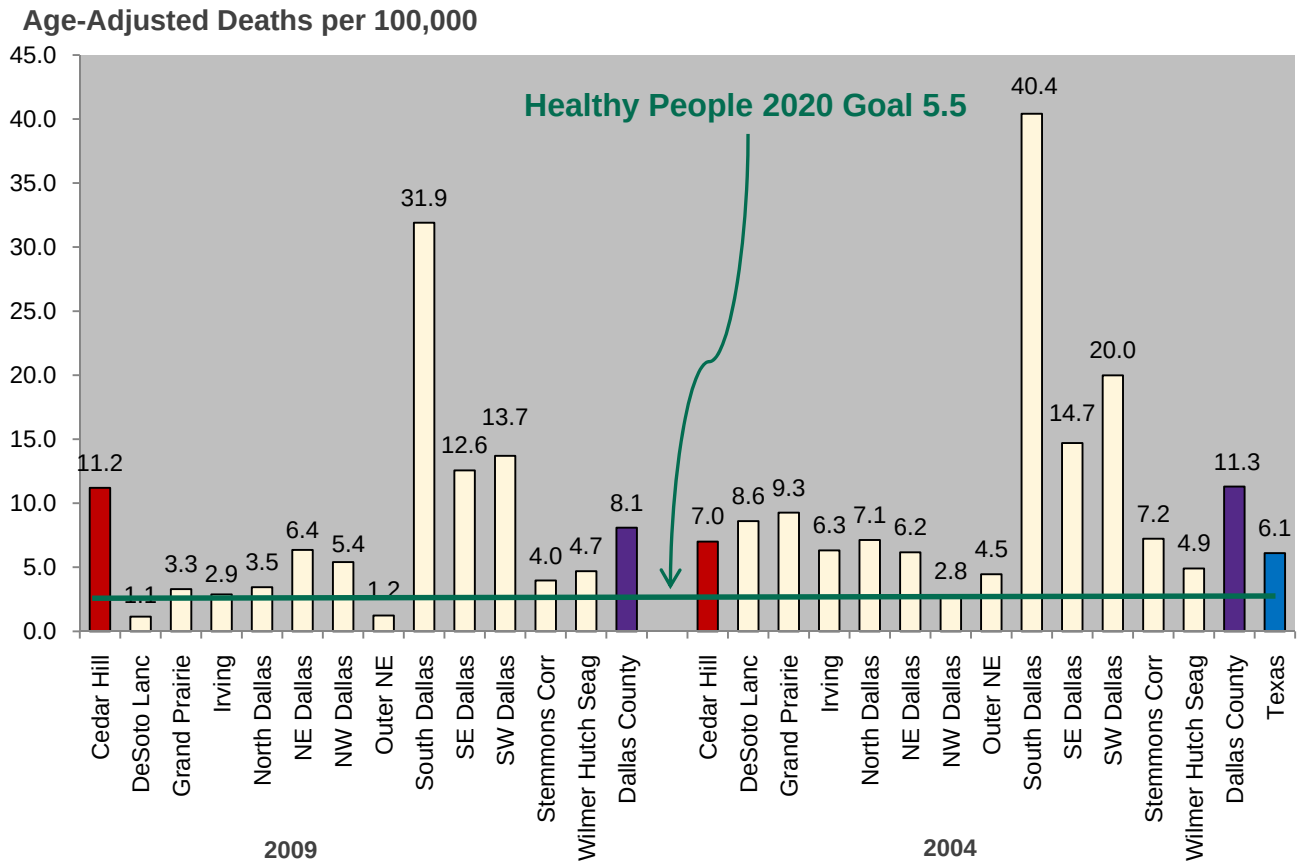


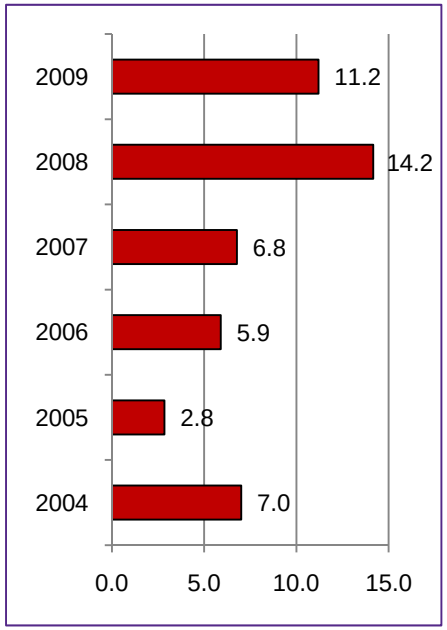


Source: Texas Department of State Health Services, Bureau of Vital Statistics; denominator population data from Claritas, Inc.

Risk Factors: Homicide Mortality Rates

Cedar Hill Service Area

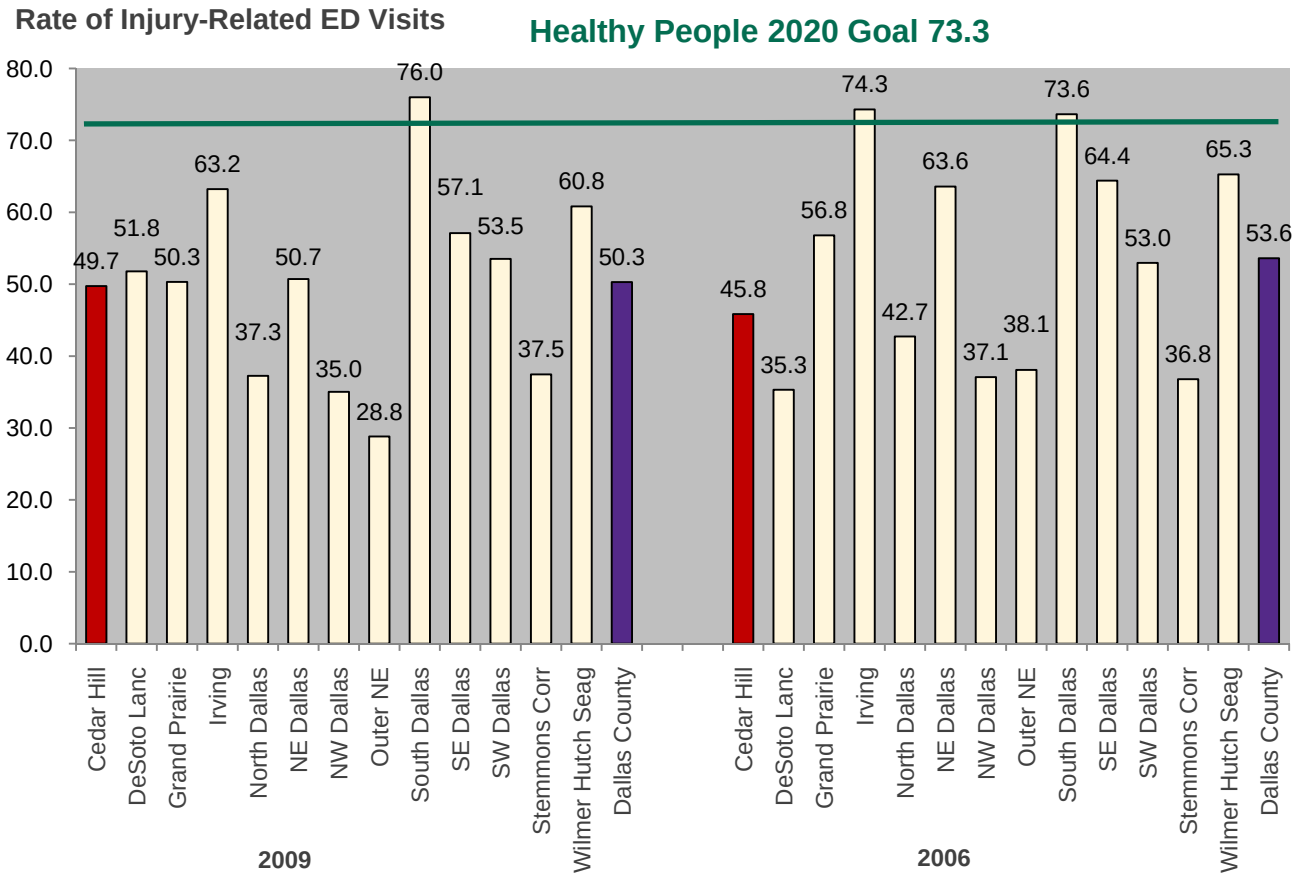


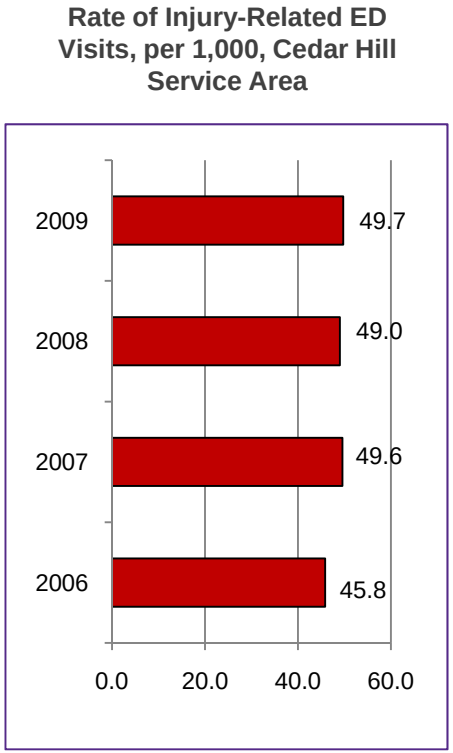


Source: Texas Department of State Health Services, Bureau of Vital Statistics; denominator population data from Claritas, Inc.

Risk Factors: Rate of Injury-Related ED Visits

Cedar Hill Service Area

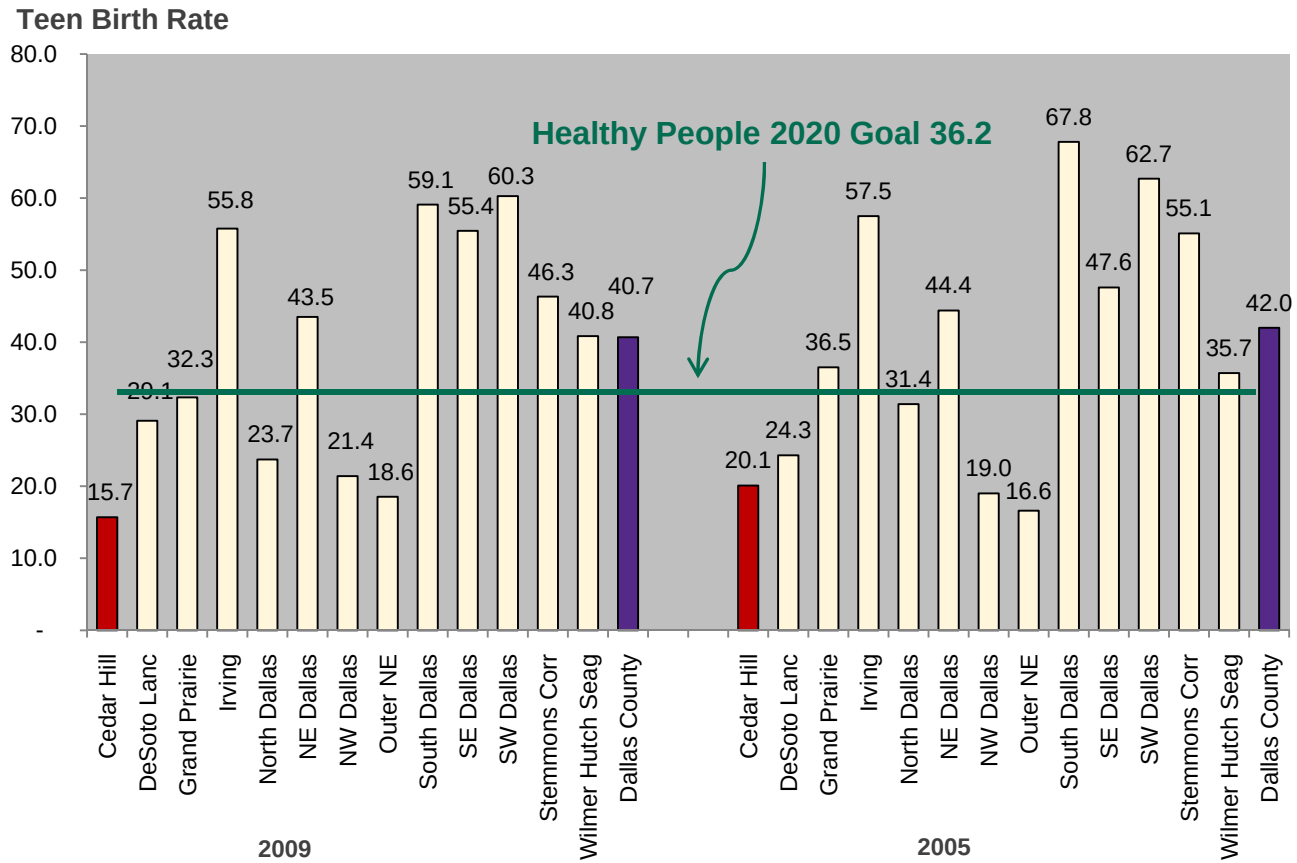


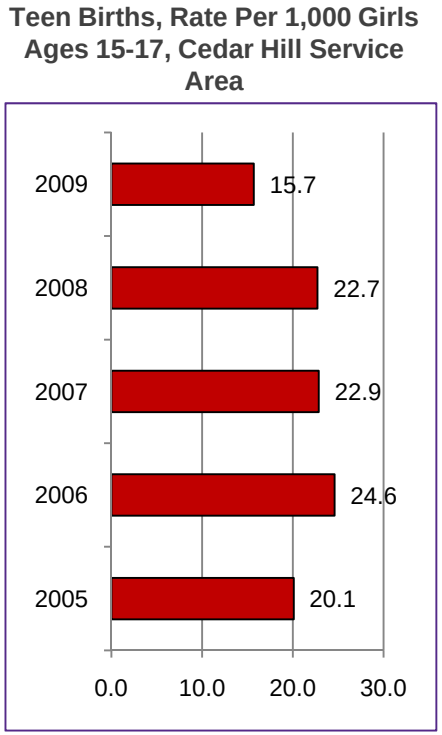


Source: Dallas Fort Worth Hospital Council, COGNOS application, unpublished data; denominator population data from Claritas, Inc.

Risk Factors: High Risk Sexual Behavior, Teen Birth Rates

Cedar Hill Service Area

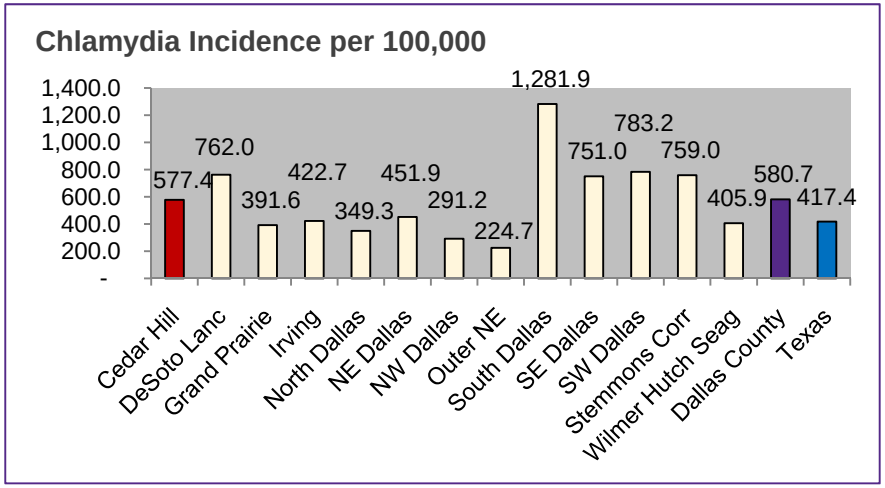


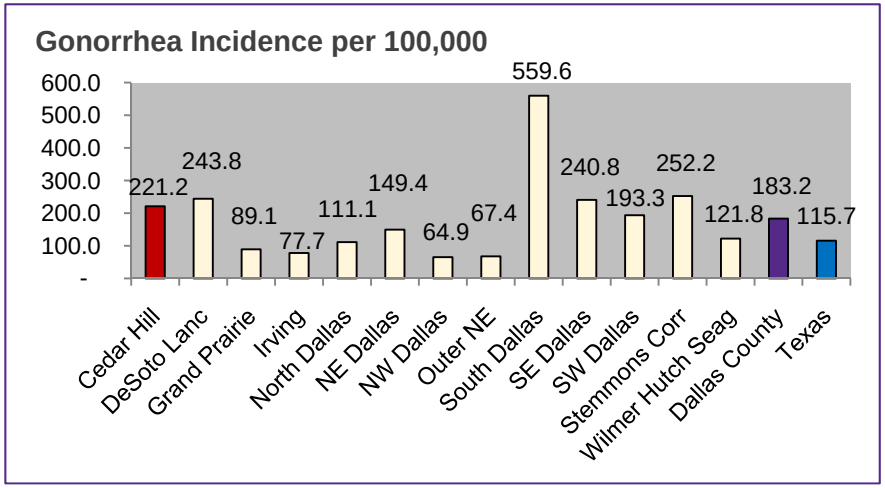


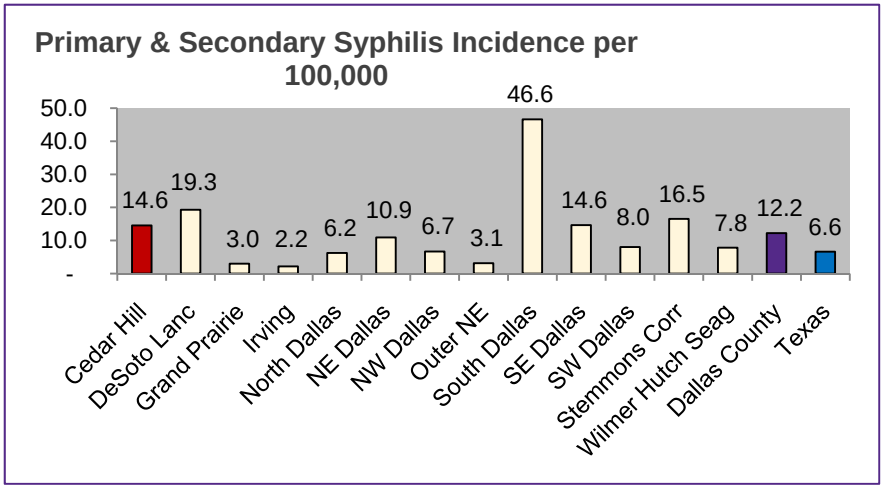
Source: Texas Department of State Health Services, Bureau of Vital Statistics; denominator population data from Claritas, Inc.

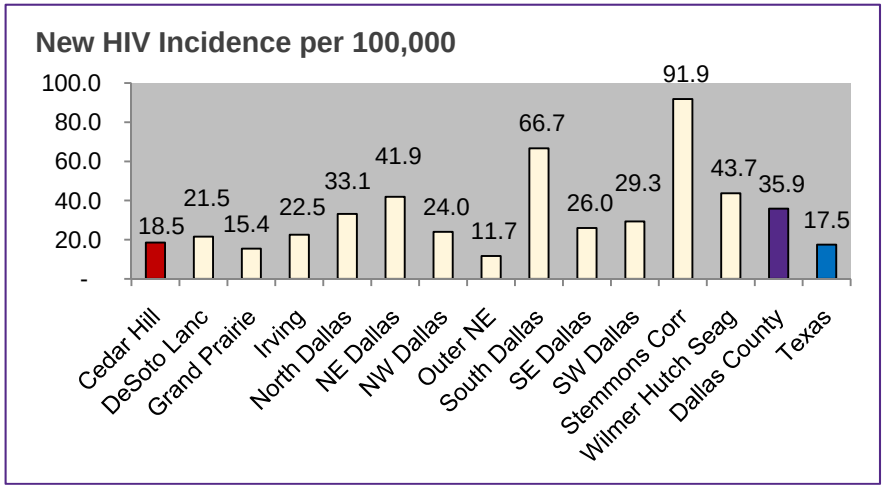
Risk Factors: High Risk Sexual Behavior, Sexually Transmitted Disease Incidence Rates, 2009

Cedar Hill Service Area







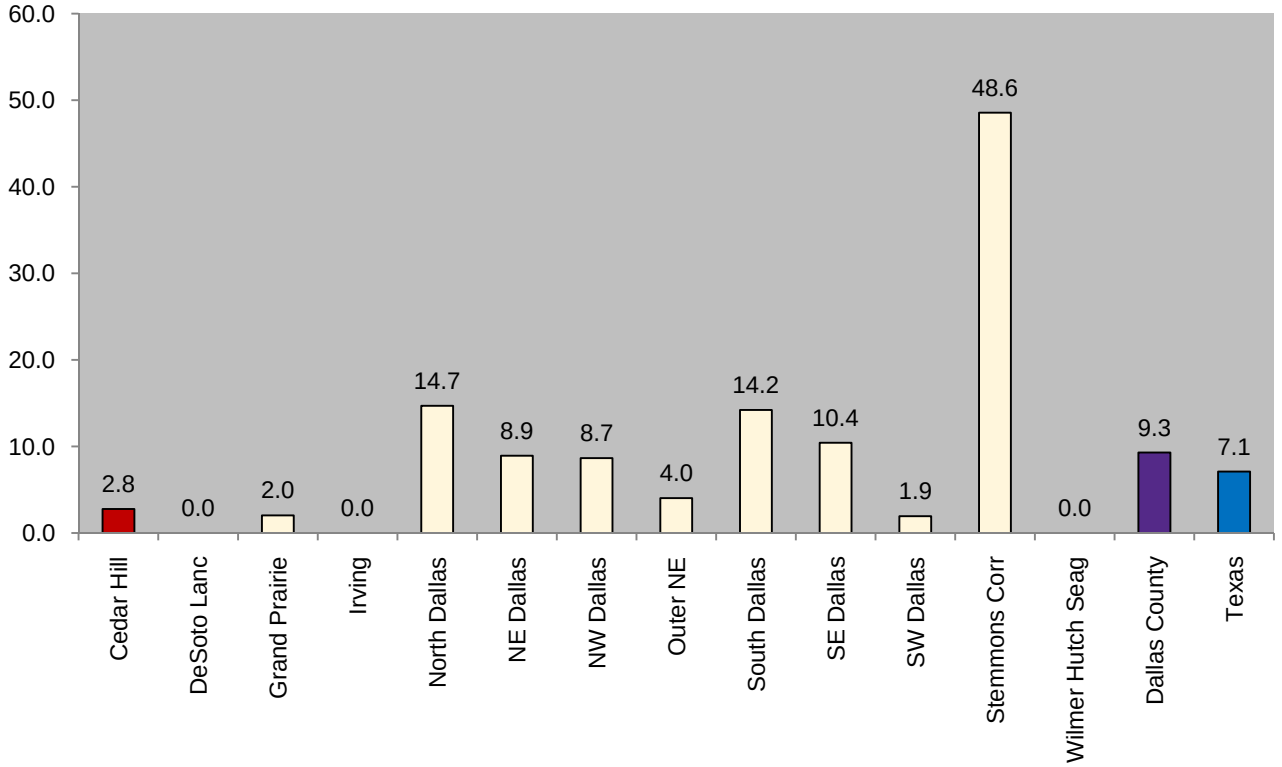


Source: Texas Department of State Health Services, Bureau of STD/HIV, unpublished data; Denominator population data from Claritas, Inc.; Dallas County and Texas Rates are from http://www.dshs.state.tx.us/hivstd/reports/STD2009.pdf and http://www.dshs.state.tx.us/hivstd/reports/HIV2009.pdf

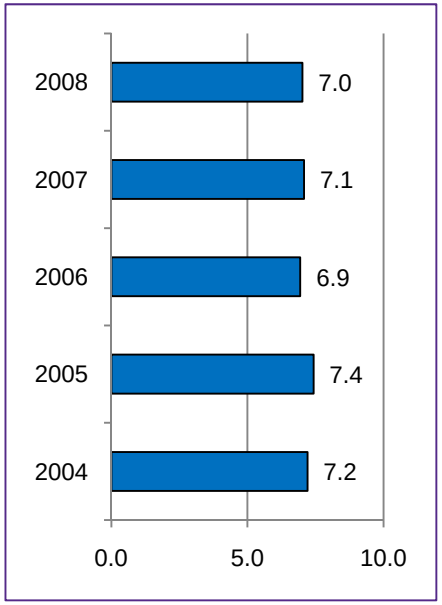
Risk Factors: Liquor Store Density, 2007

Cedar Hill Service Area

Liquor Stores Per 100,000, 2007



Liquor Store Density, Stores per 100,000, State of Texas

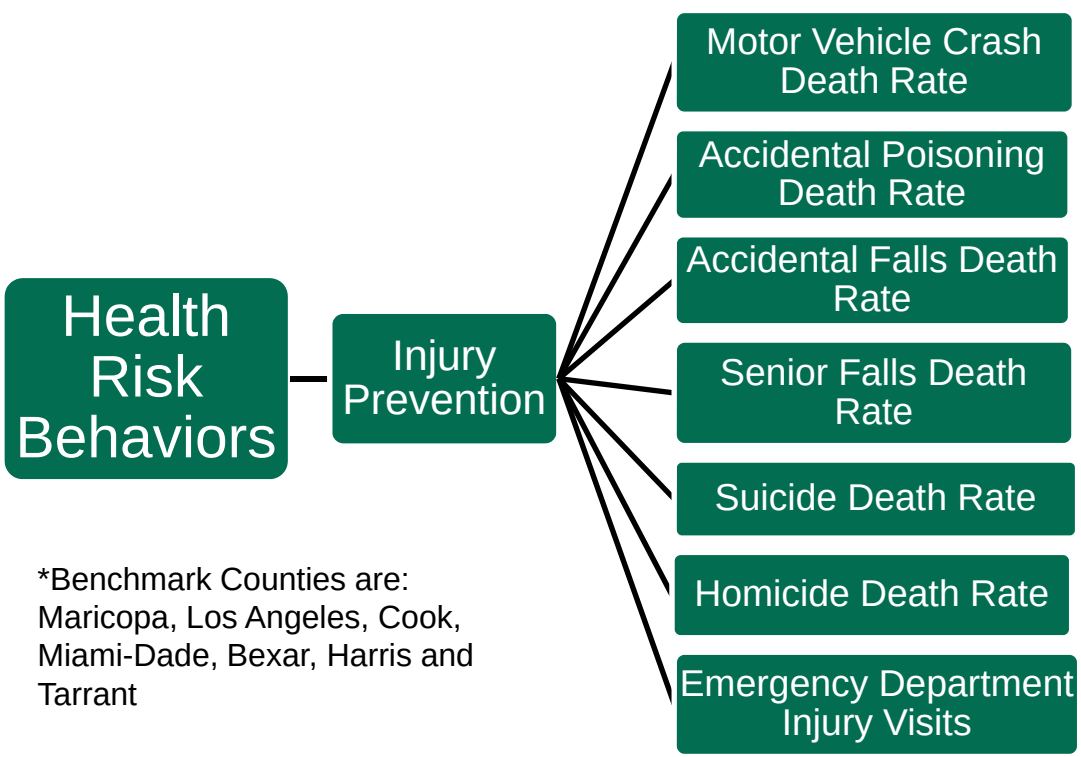


NOTE: No Healthy People 2020 goal matches this metric.

Source: US Census Bureau, 2007 Economic Census; denominator population data from Claritas, Inc.; Dallas County and State of Texas data from US Census Bureau, NIACS annual business estimates, denominator is American Community Survey 2007 population estimate

Health Risk Behaviors

– Doing better than the benchmark
– Same as/not significantly different from the benchmark
– Worse than the benchmark



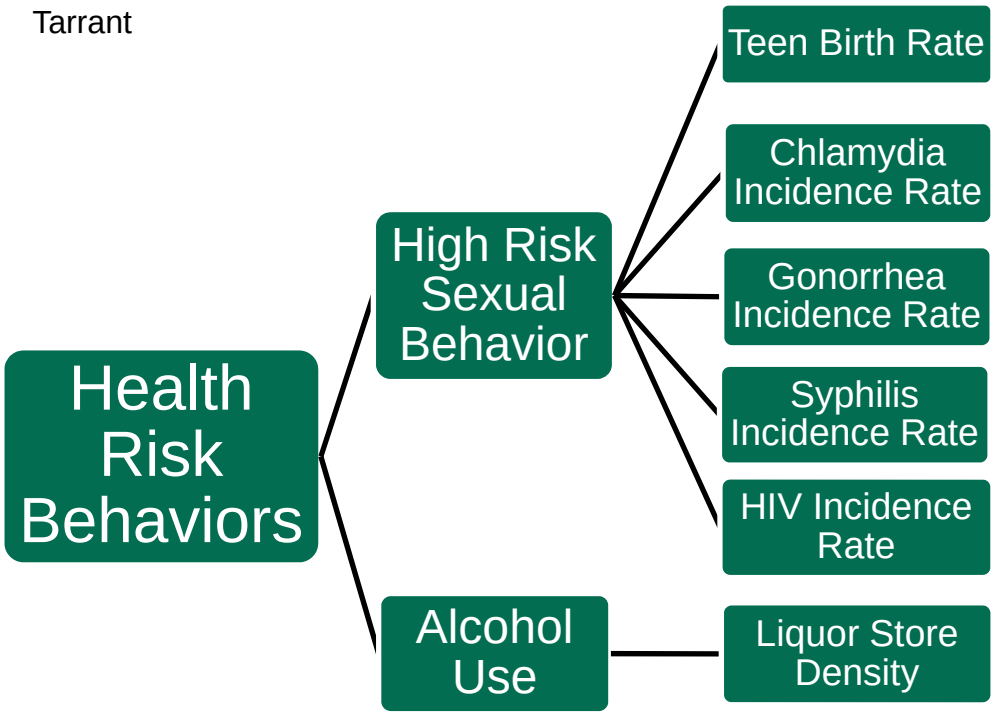
Cedar Hill Compared to Healthy People 2020 Goal	Cedar Hill Compared to Benchmark Counties* (Quartiles)	Cedar Hill Compared to Past Years' Data (CI)
🟢	🟢	🟡
🟢	🟢	🟡
🟢	🟢	🟡
🟢	🟢	🟡
🟡	🟢	🟡
🔴	🔴	🟡
🟢	🟢	🔴

*Benchmark Counties are: Maricopa, Los Angeles, Cook, Miami-Dade, Bexar, Harris and Tarrant

Health Risk Behaviors

– Doing better than the benchmark
– Same as/not significantly different from the benchmark
– Worse than the benchmark

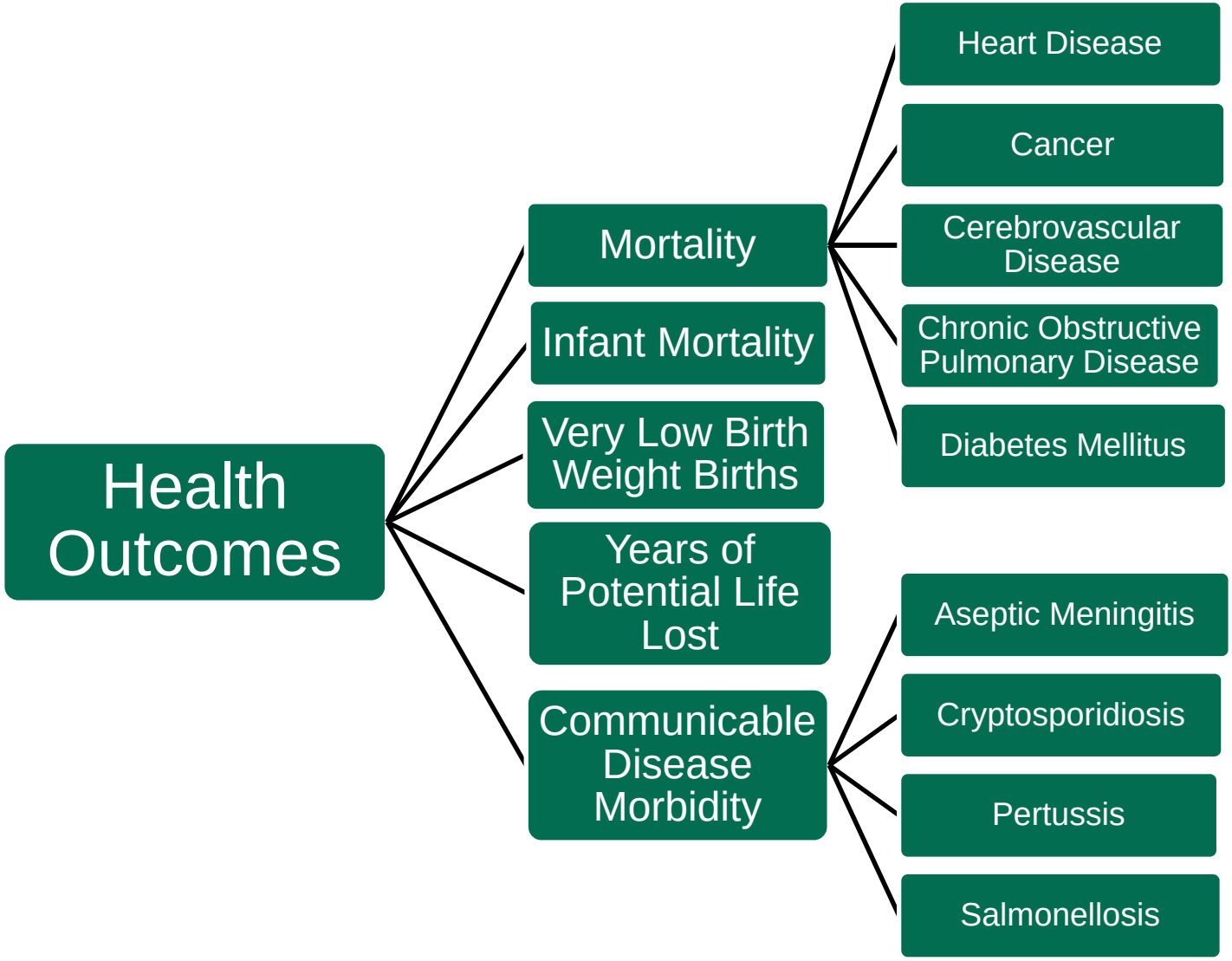
*Benchmark Counties are: Maricopa, Los Angeles, Cook, Miami-Dade, Bexar, Harris and Tarrant



Cedar Hill Compared to Healthy People 2020 Goal	Cedar Hill Compared to Benchmark Counties* (Quartiles)	Cedar Hill Compared to Past Years' Data (CI)
		
N/A		
N/A		
N/A		
N/A		
N/A		N/A

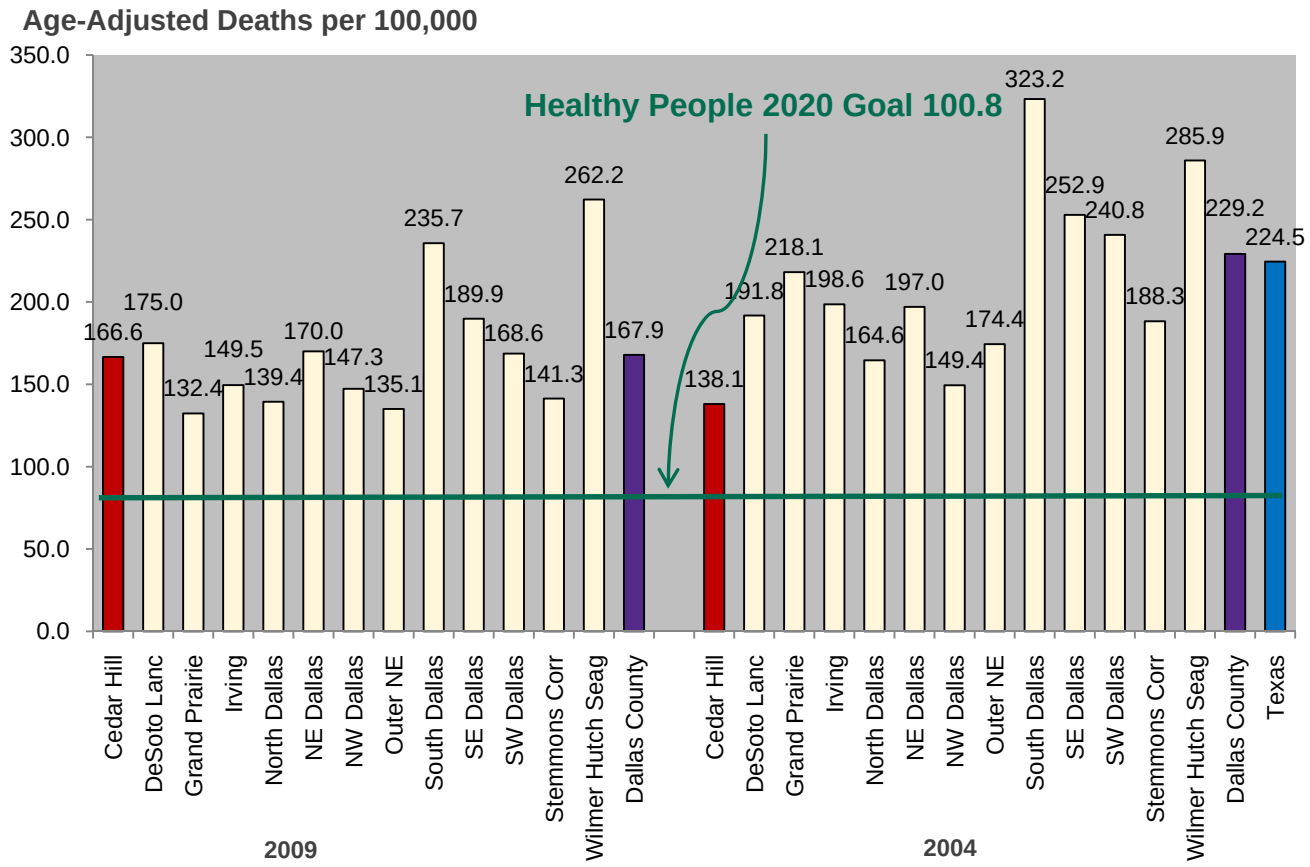
Parkland

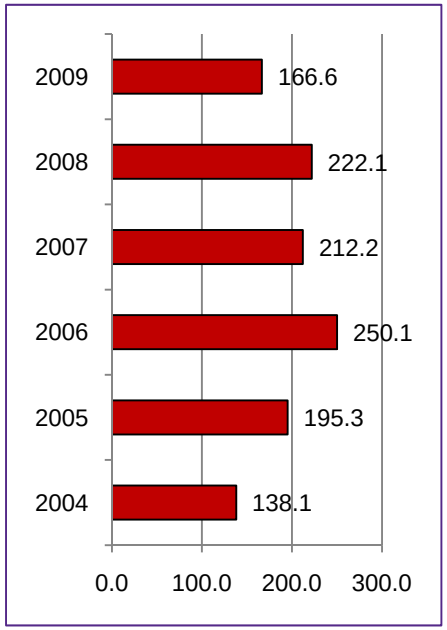
Health Outcomes



Health Outcomes: Heart Disease Mortality Rates

Cedar Hill Service Area

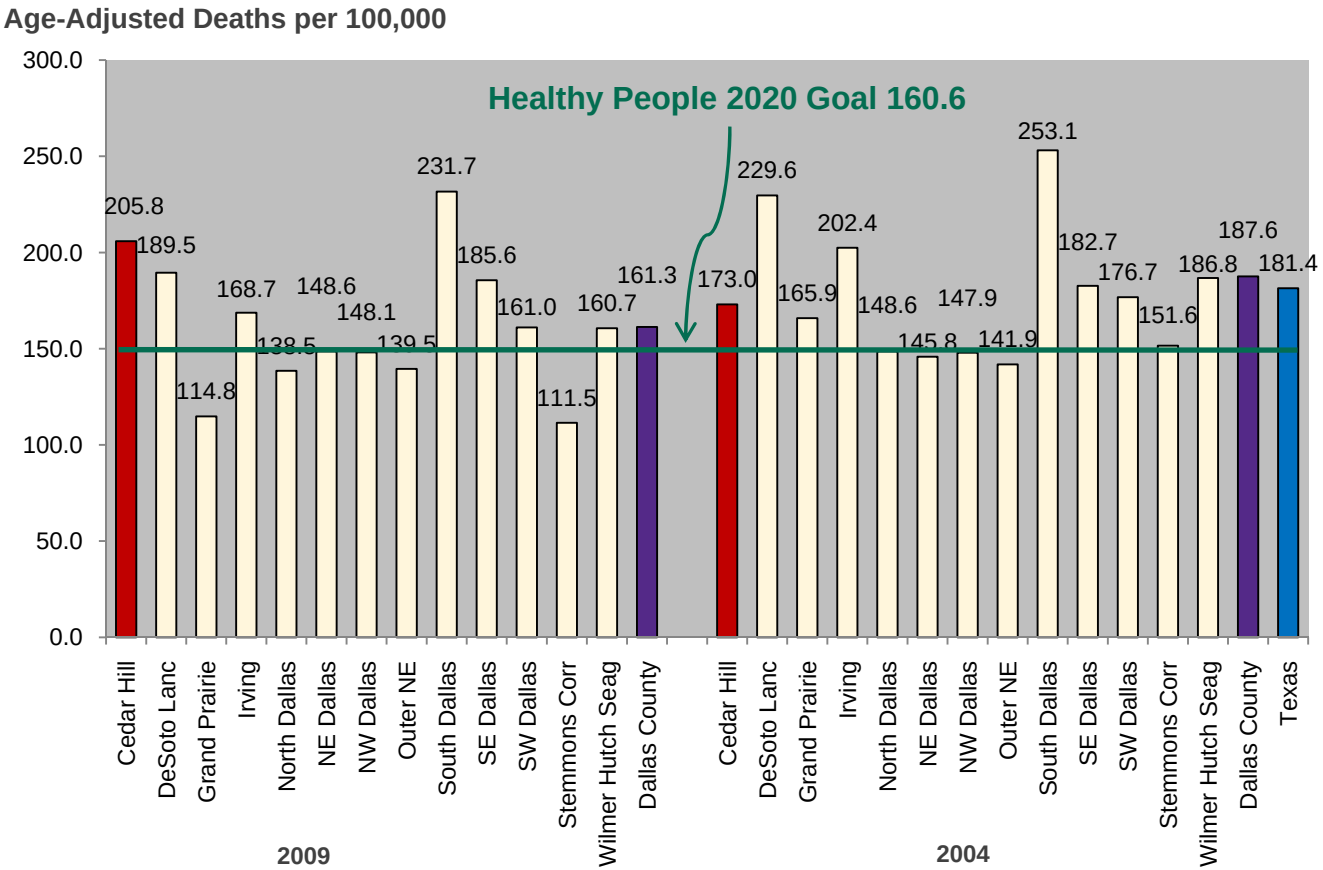


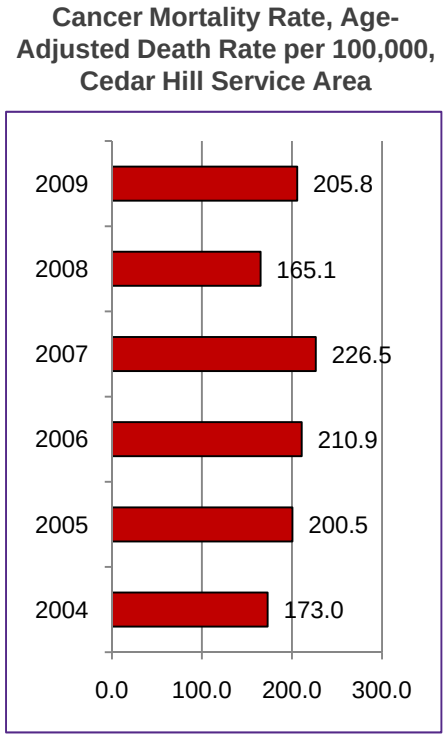


Source: Texas Department of State Health Services, Bureau of Vital Statistics; denominator population data from Claritas, Inc.

Health Outcomes: Cancer Mortality Rates

Cedar Hill Service Area

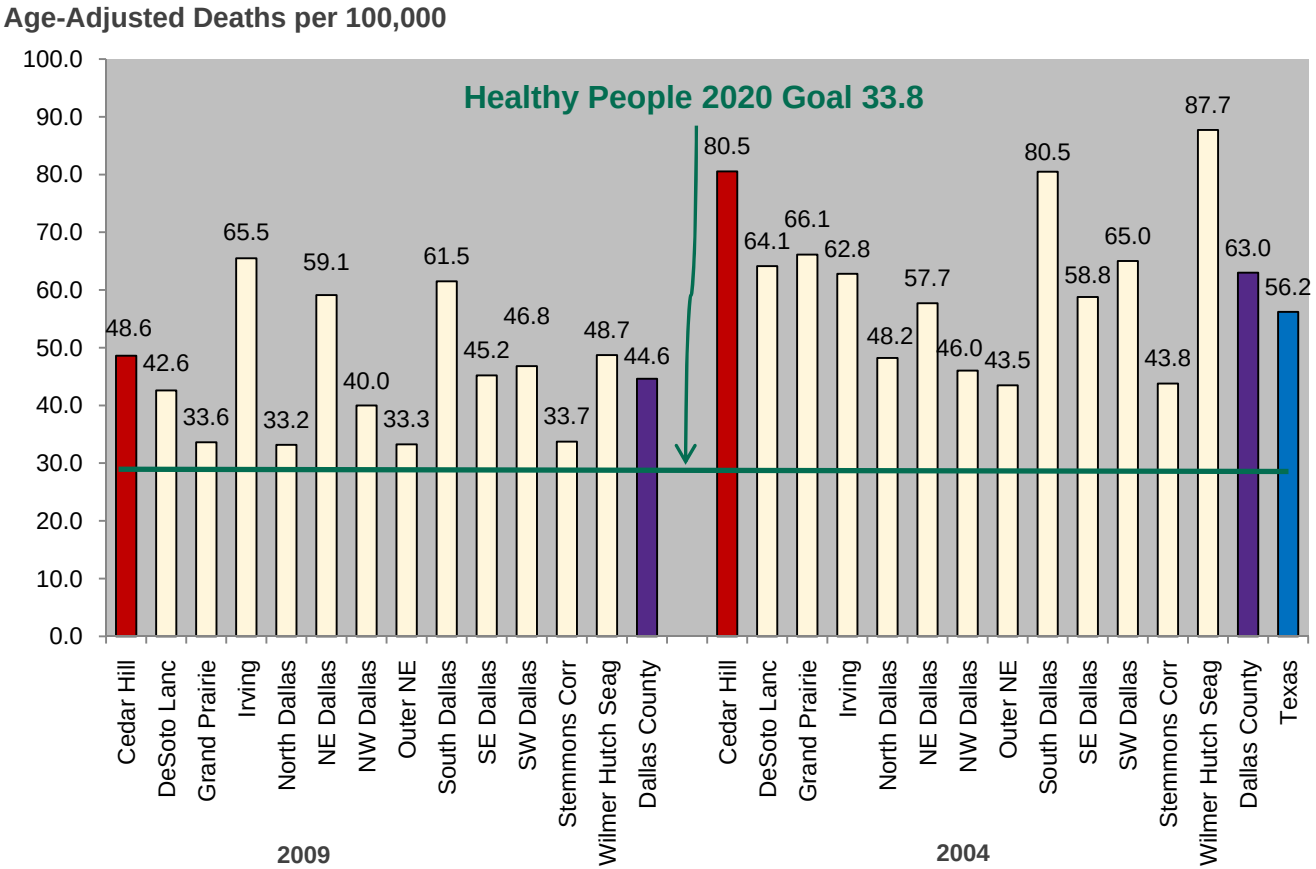


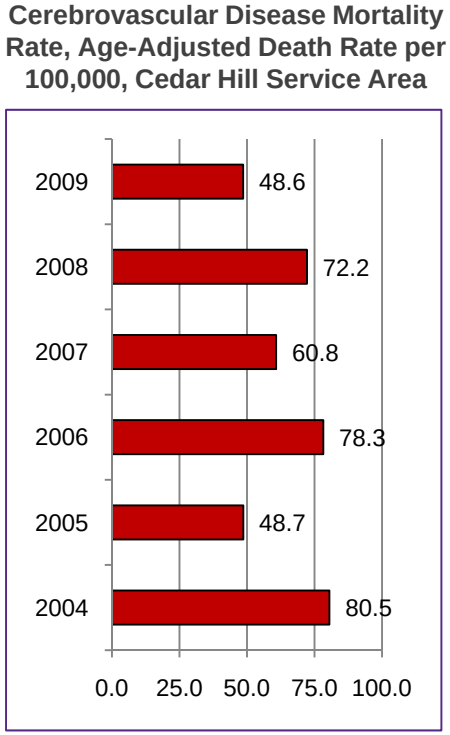


Source: Texas Department of State Health Services, Bureau of Vital Statistics; denominator population data from Claritas, Inc.

Health Outcomes: Cerebrovascular Disease Mortality Rates

Cedar Hill Service Area

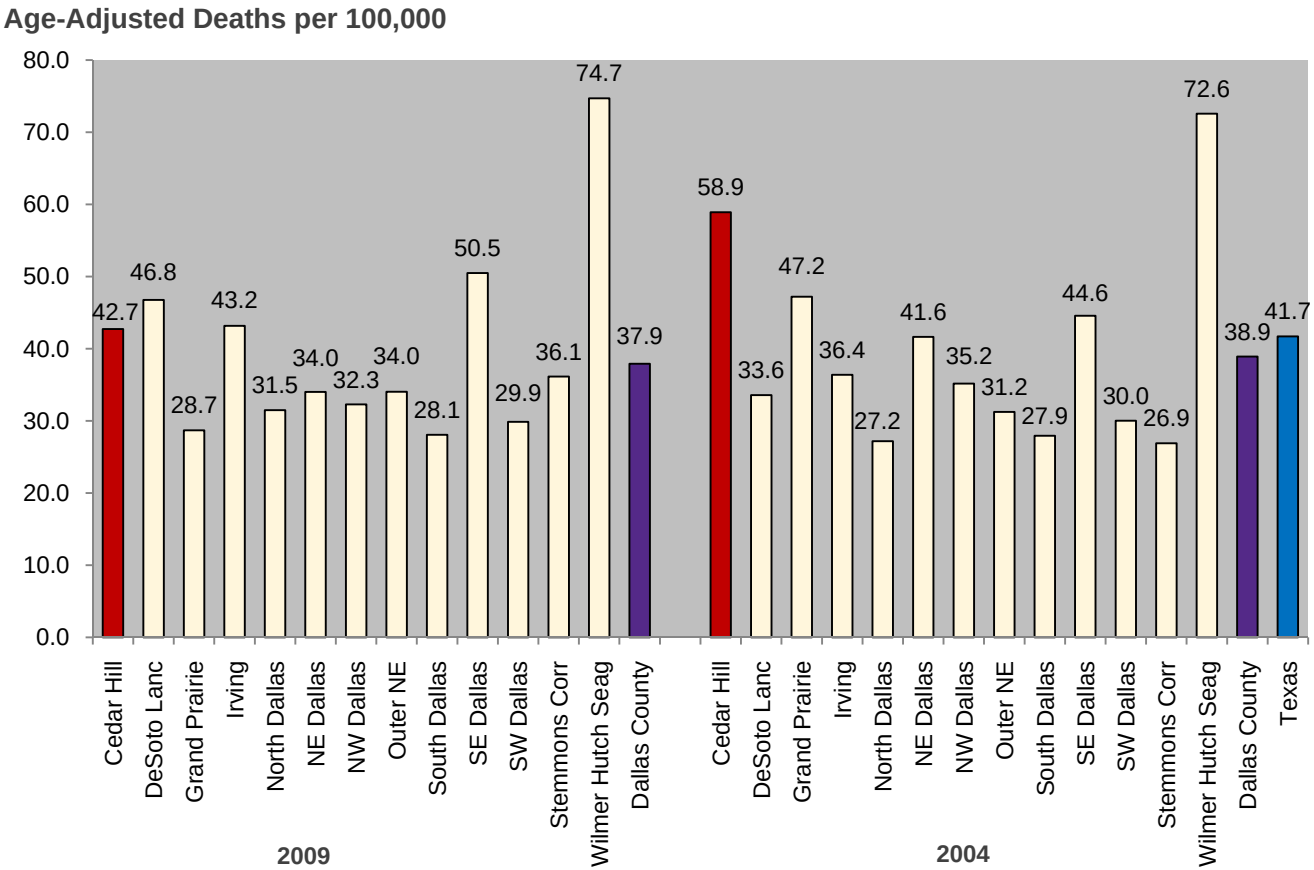




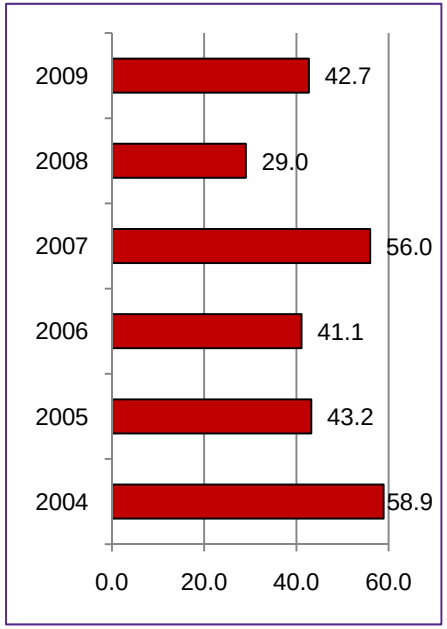
Source: Texas Department of State Health Services, Bureau of Vital Statistics; denominator population data from Claritas, Inc.

Health Outcomes: Chronic Obstructive Pulmonary Disease Mortality Rates

Cedar Hill Service Area



Chronic Obstructive Pulmonary Disease Mortality Rate, Age-Adjusted Death Rate per 100,000, Cedar Hill Service Area

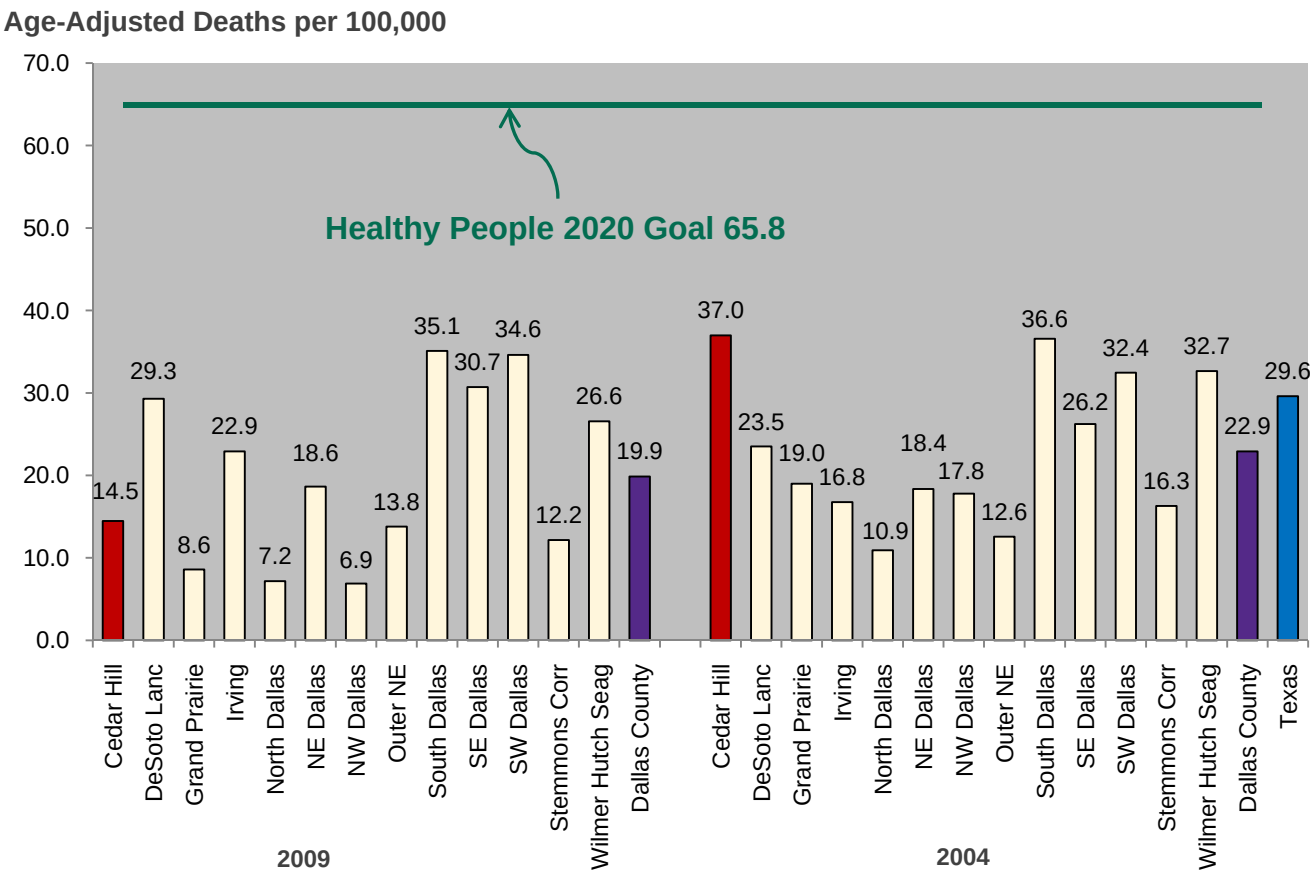


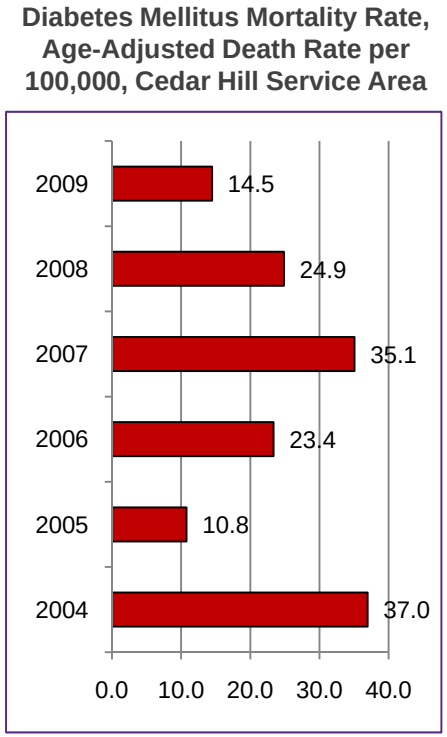
NOTE: No Healthy People 2020 goal matches this metric.

Source: Texas Department of State Health Services, Bureau of Vital Statistics; denominator population data from Claritas, Inc.

Health Outcomes: Diabetes Mortality Rates

Cedar Hill Service Area

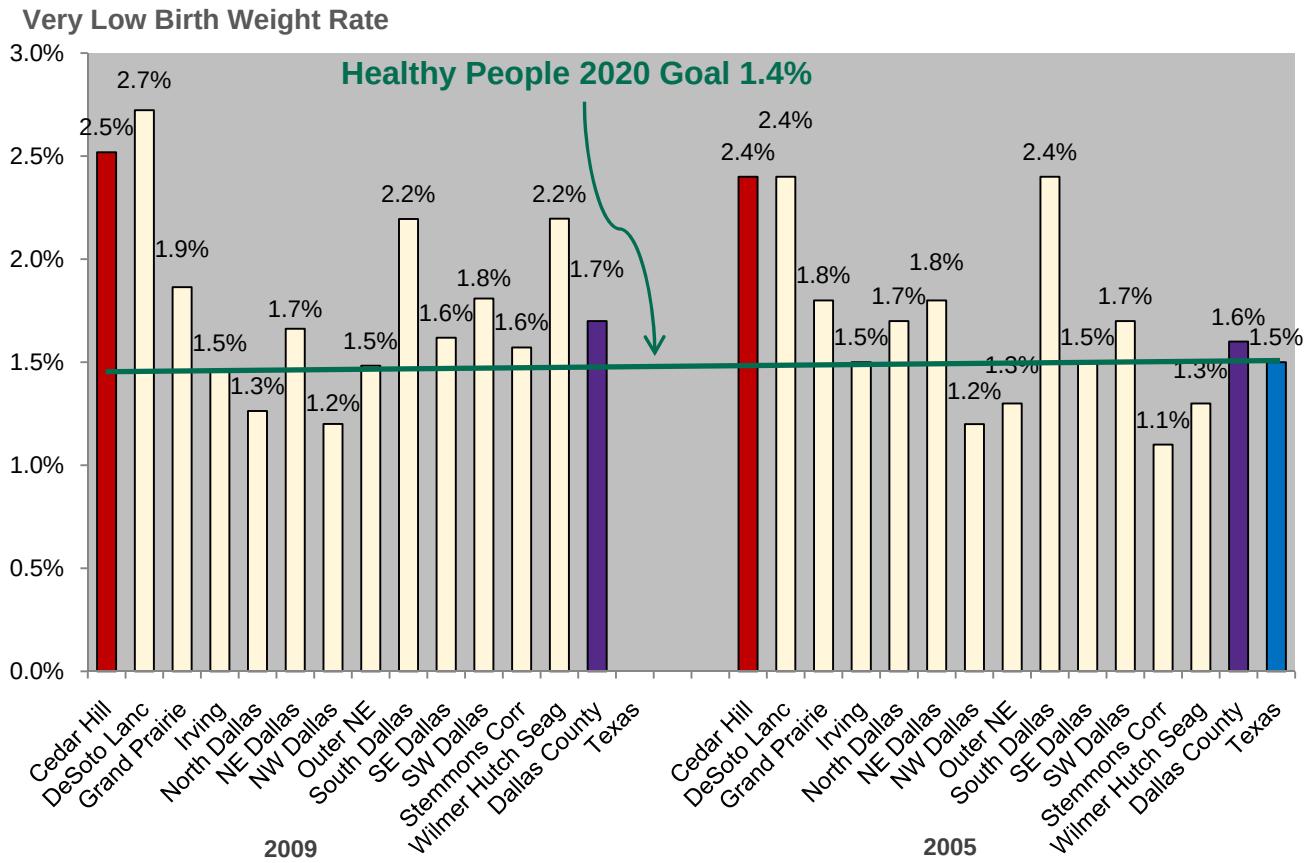


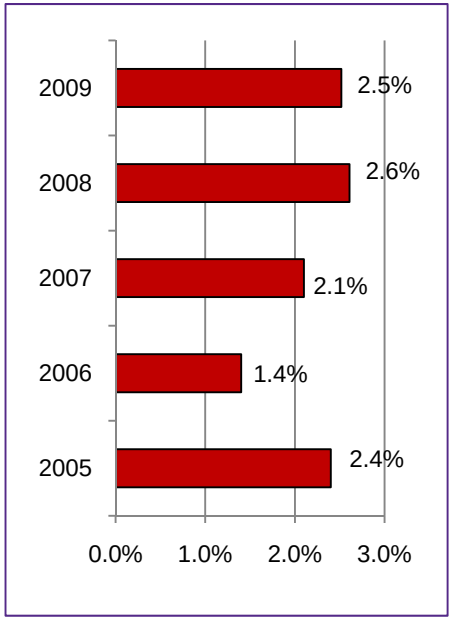


Source: Texas Department of State Health Services, Bureau of Vital Statistics; denominator population data from Claritas, Inc.

Health Outcomes: Birth Outcomes, Rate of Very Low Birth Weight Births

Cedar Hill Service Area

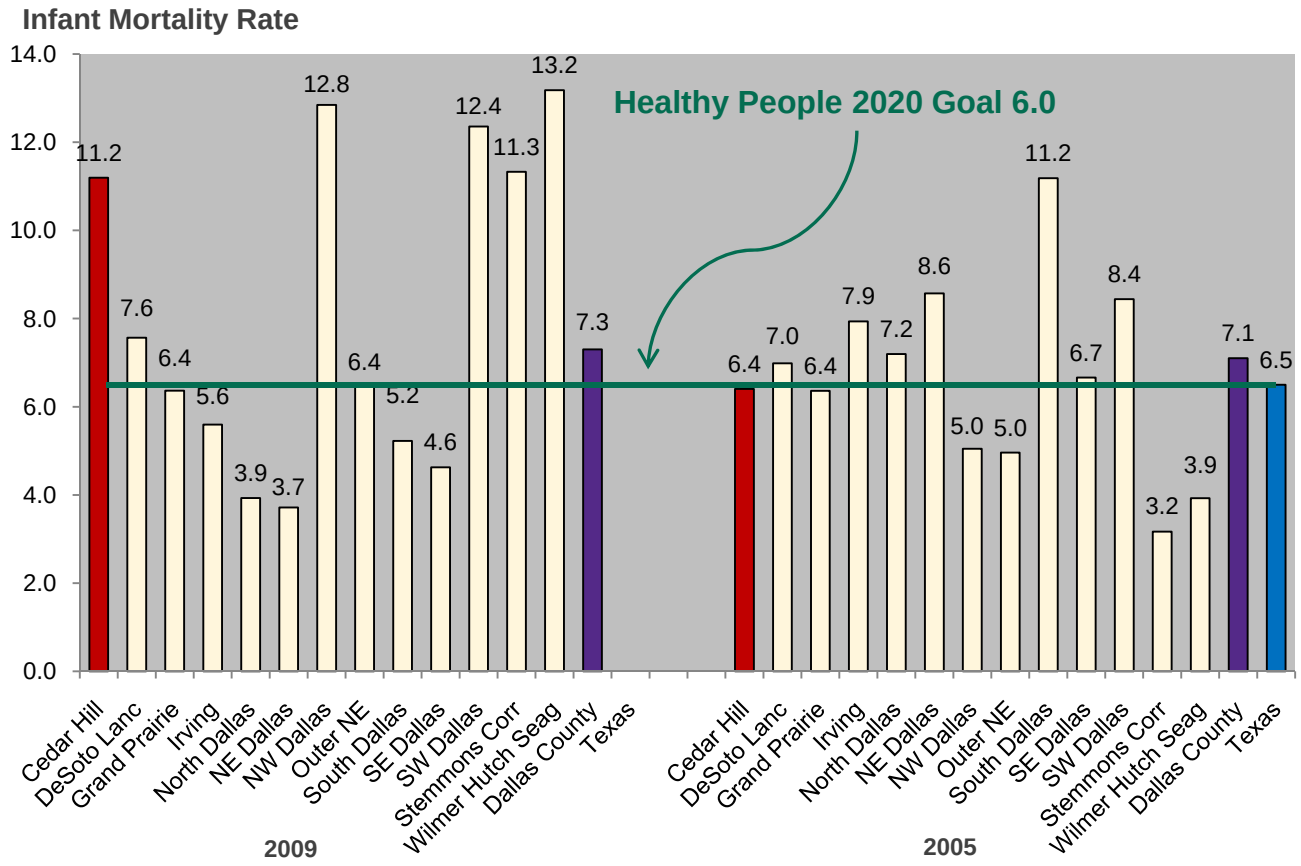


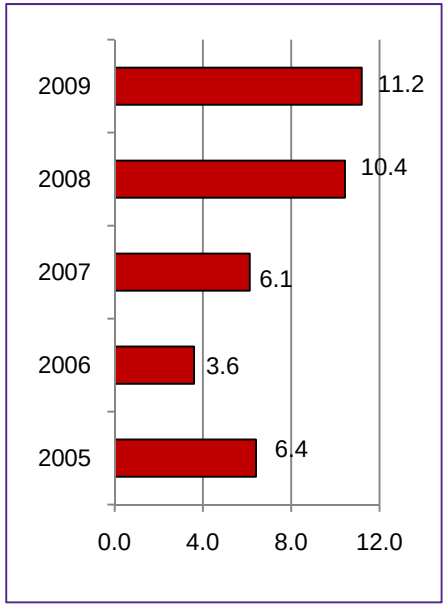


Source: Texas Department of State Health Services, Bureau of Vital Statistics; denominator population data from Claritas, Inc.

Health Outcomes: Birth Outcomes, Infant Mortality Rate

Cedar Hill Service Area



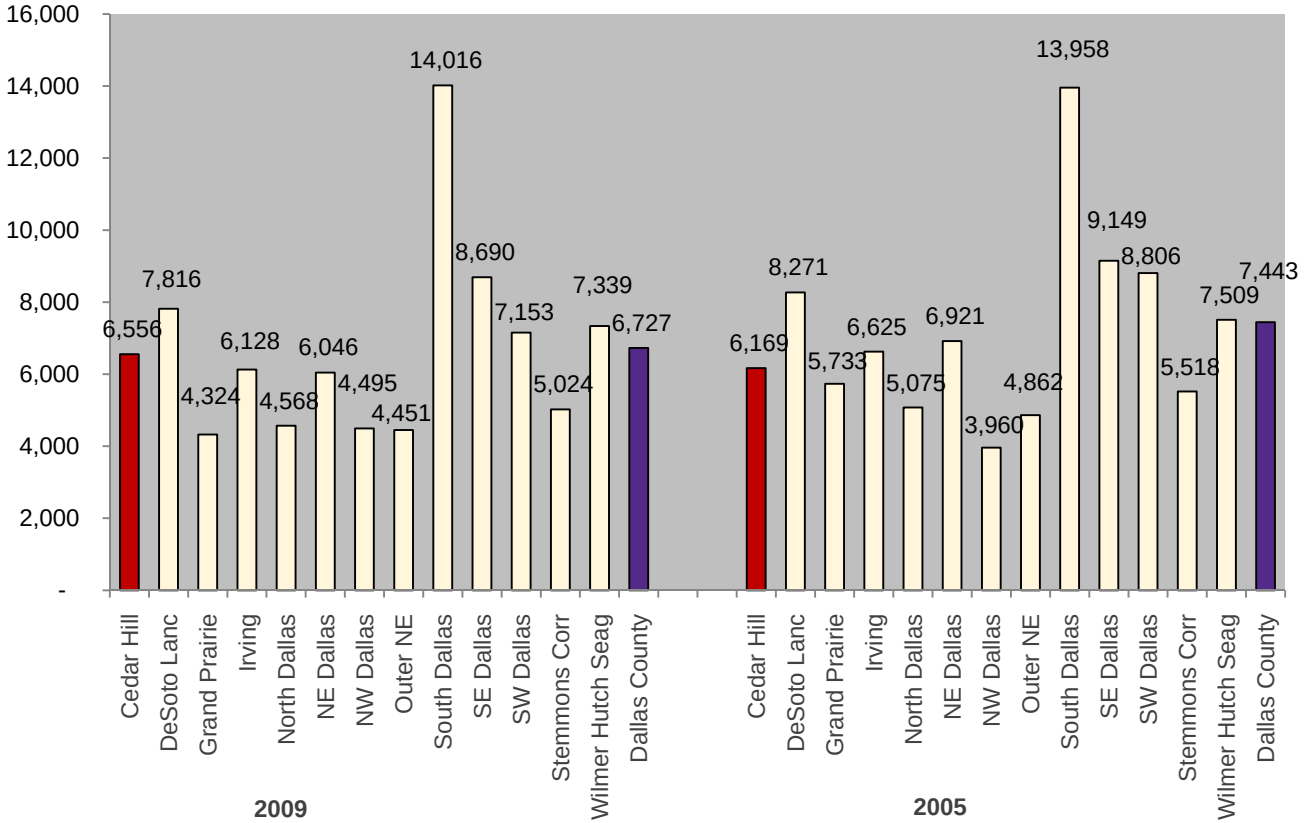


Source: Texas Department of State Health Services, Bureau of Vital Statistics; denominator population data from Claritas, Inc.

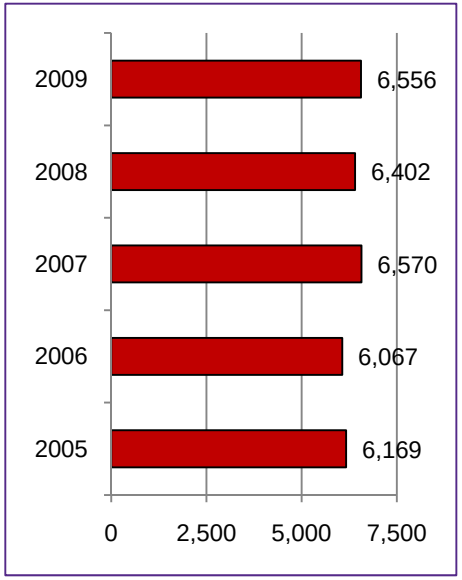
Health Outcomes: Years of Potential Life Lost, All Causes

Cedar Hill Service Area

Years of Potential Life Lost Rate per 100,000*



Years of Potential Life Lost Rate*, per 100,000, Cedar Hill Service Area

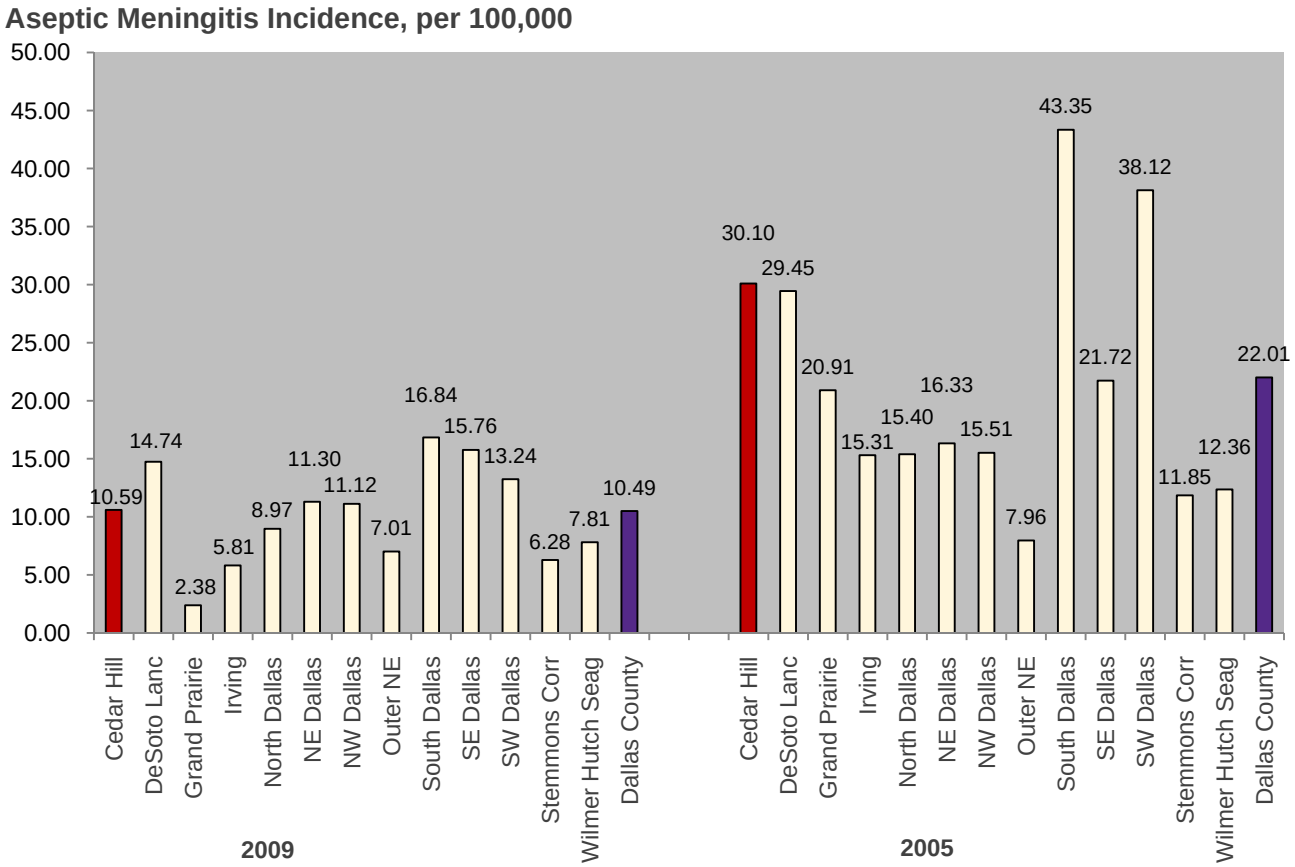


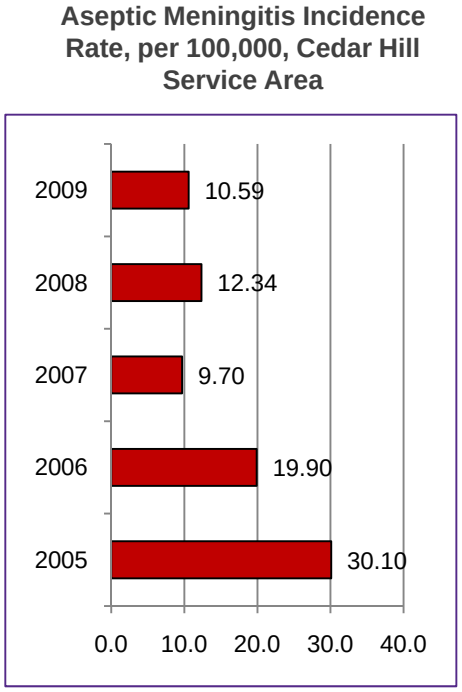
***Years of Potential Life Lost Rate is defined as the rate of deaths under age 75 per 100,000 population under age 75.**

Source: Texas Department of State Health Services, Bureau of Vital Statistics; denominator population data from Claritas, Inc.

Health Outcomes: Reportable Communicable Disease Rates

Cedar Hill Service Area

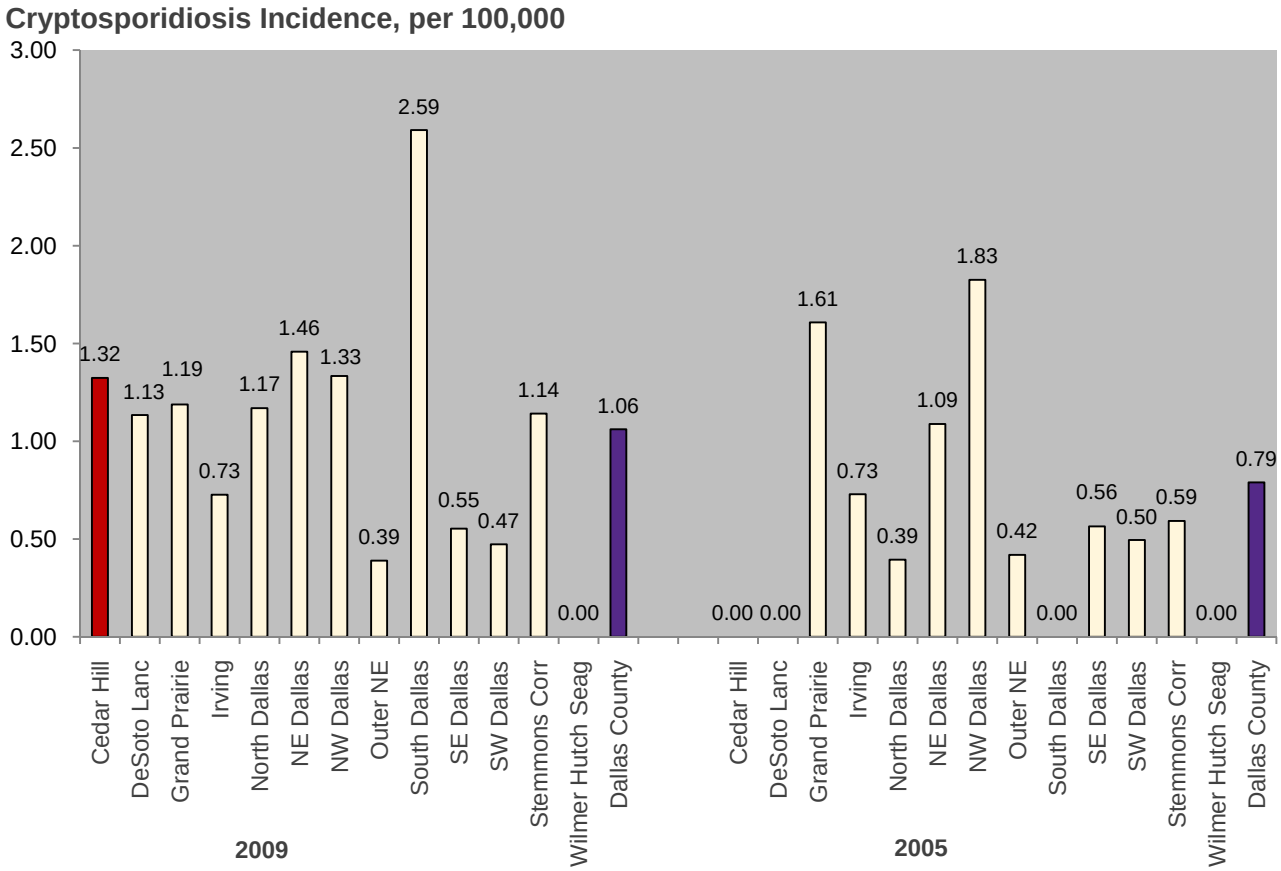


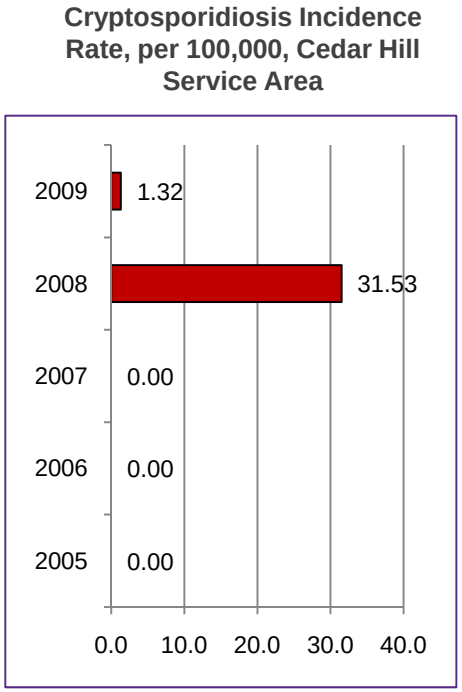


Source: Texas Department of State Health Services, Infectious Disease Control Unit, unpublished data; denominator population data from Claritas, Inc.; 2005 Dallas County data from Dallas County Health and Human Services web site: http://www.dallascounty.org/department/hhservices/services/communicable/documents/ReportableConditions2003-07Annual.pdf; 2005 Dallas County denominator population data from American Community Survey.

Health Outcomes: Reportable Communicable Disease Rates

Cedar Hill Service Area

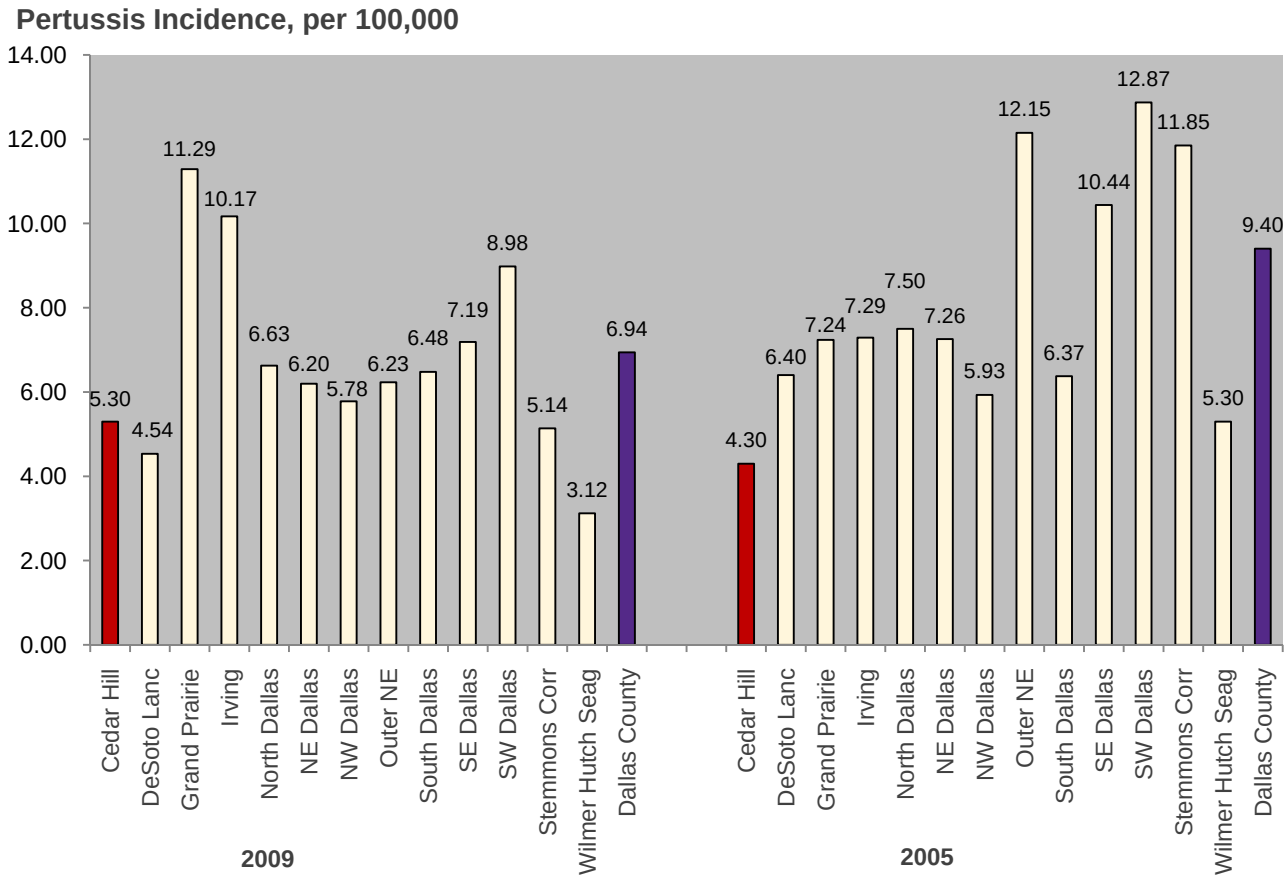


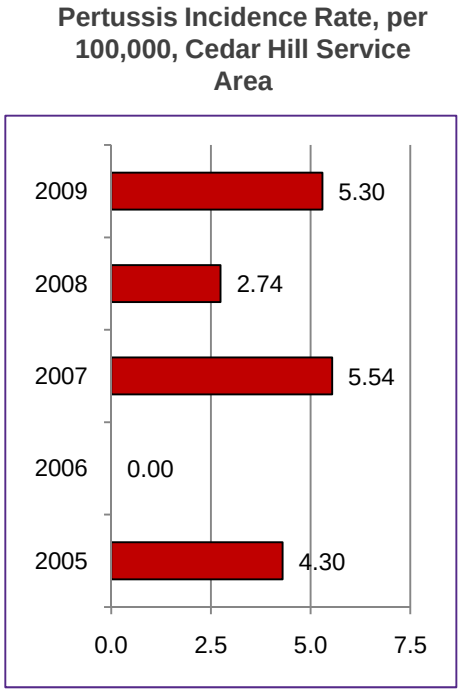


Source: Texas Department of State Health Services, Infectious Disease Control Unit, unpublished data; denominator population data from Claritas, Inc.; 2005 Dallas County data from Dallas County Health and Human Services web site: http://www.dallascounty.org/department/hhservices/services/communicable/documents/ReportableConditions2003-07Annual.pdf; 2005 Dallas County denominator population data from American Community Survey.

Health Outcomes: Reportable Communicable Disease Rates

Cedar Hill Service Area

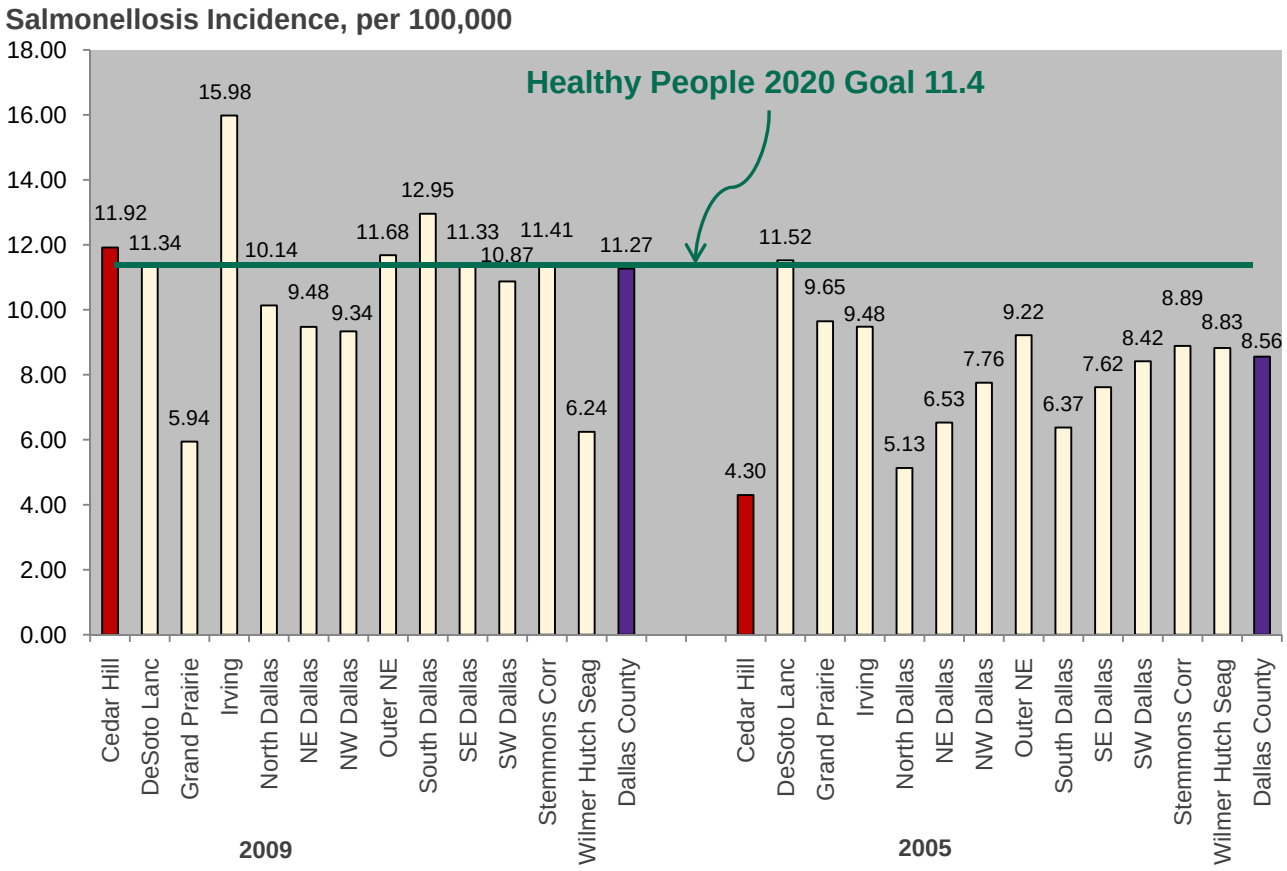


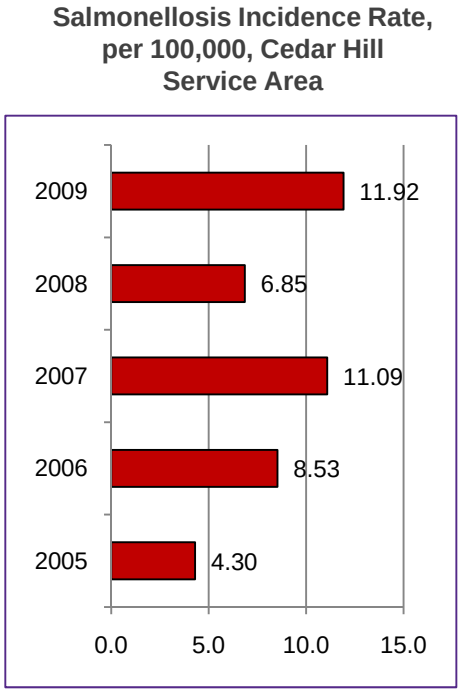


Source: Texas Department of State Health Services, Infectious Disease Control Unit, unpublished data; denominator population data from Claritas, Inc.; 2005 Dallas County data from Dallas County Health and Human Services web site: http://www.dallascounty.org/department/hhservices/services/communicable/documents/ReportableConditions2003-07Annual.pdf; 2005 Dallas County denominator population data from American Community Survey.

Health Outcomes: Reportable Communicable Disease Rates

Cedar Hill Service Area

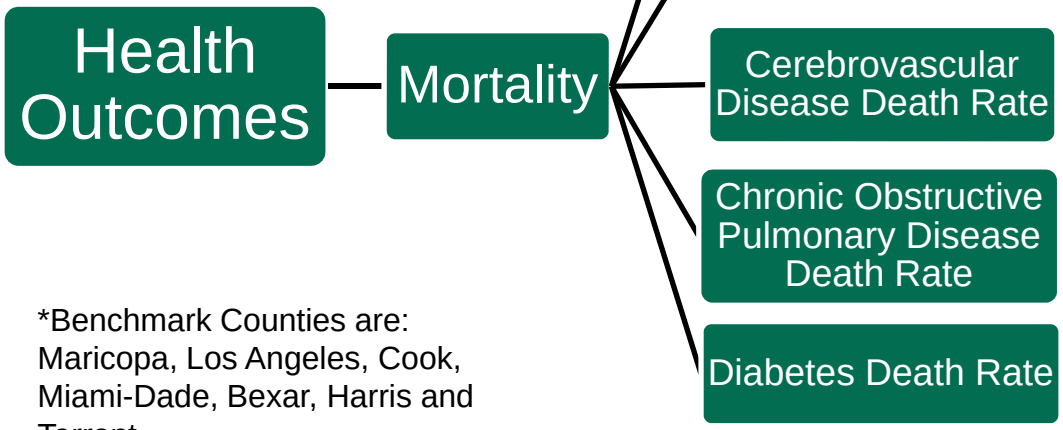




Source: Texas Department of State Health Services, Infectious Disease Control Unit, unpublished data; denominator population data from Claritas, Inc.; 2005 Dallas County data from Dallas County Health and Human Services web site: http://www.dallascounty.org/department/hhservices/services/communicable/documents/ReportableConditions2003-07Annual.pdf; 2005 Dallas County denominator population data from American Community Survey.

Health Outcomes

– Doing better than the benchmark
– Same as/not significantly different from the benchmark
– Worse than the benchmark



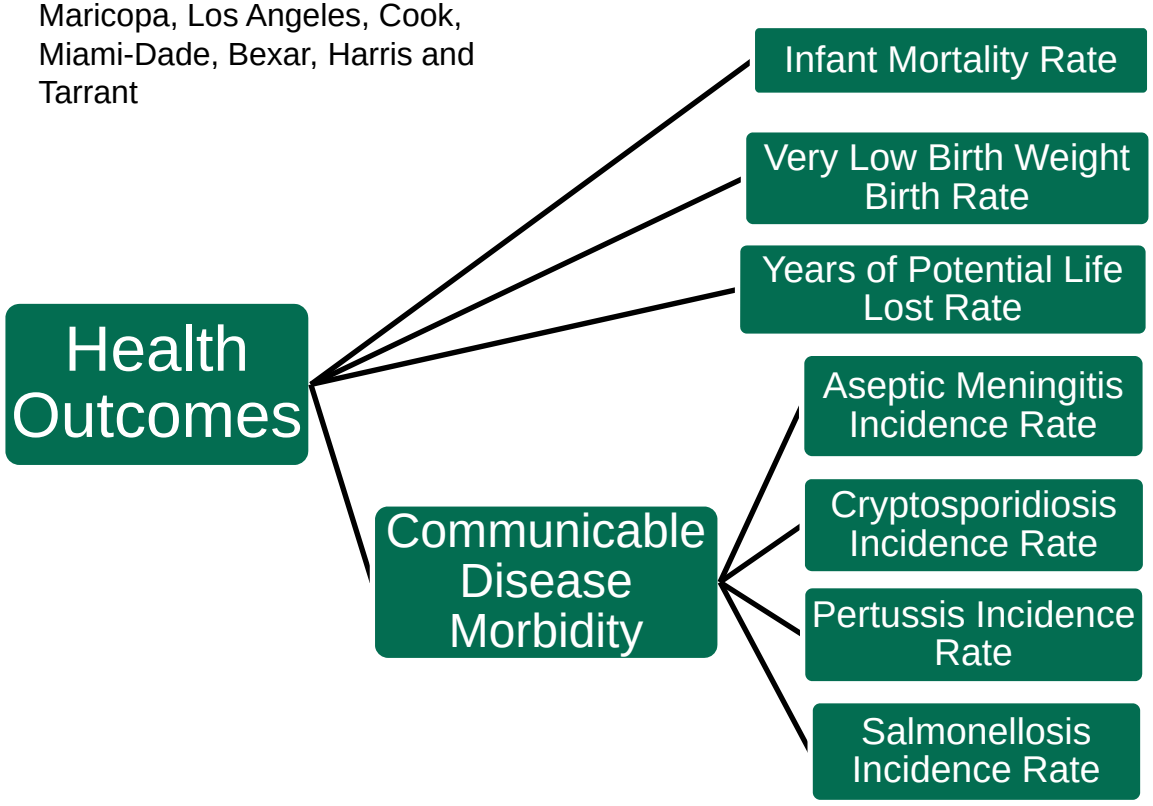
Cedar Hill Compared to Healthy People 2020 Goal	Cedar Hill Compared to Benchmark Counties* (Quartiles)	Cedar Hill Compared to Past Years' Data (CI)
N/A		

*Benchmark Counties are: Maricopa, Los Angeles, Cook, Miami-Dade, Bexar, Harris and Tarrant

Health Outcomes

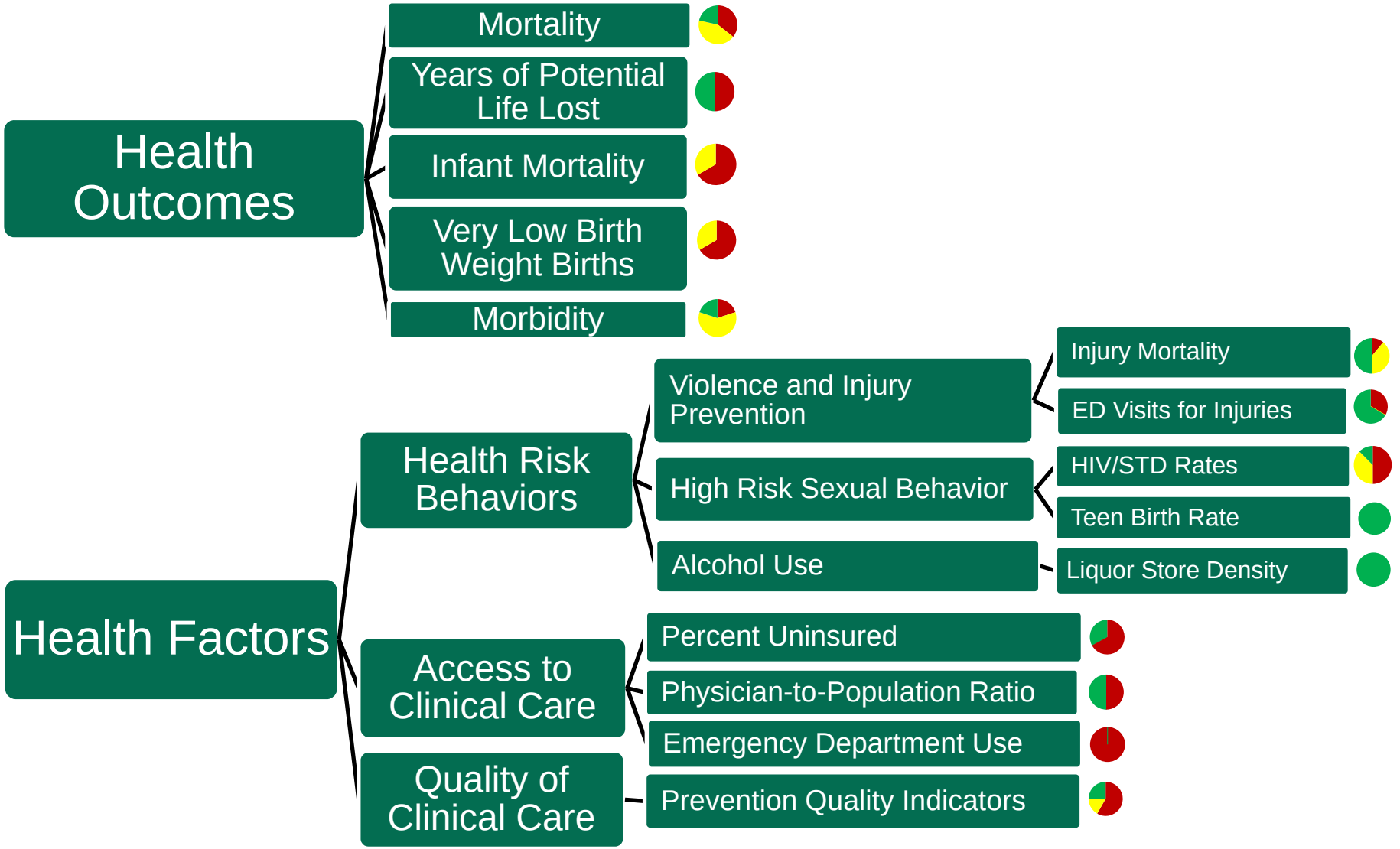
– Doing better than the benchmark
– Same as/not significantly different from the benchmark
– Worse than the benchmark

*Benchmark Counties are: Maricopa, Los Angeles, Cook, Miami-Dade, Bexar, Harris and Tarrant

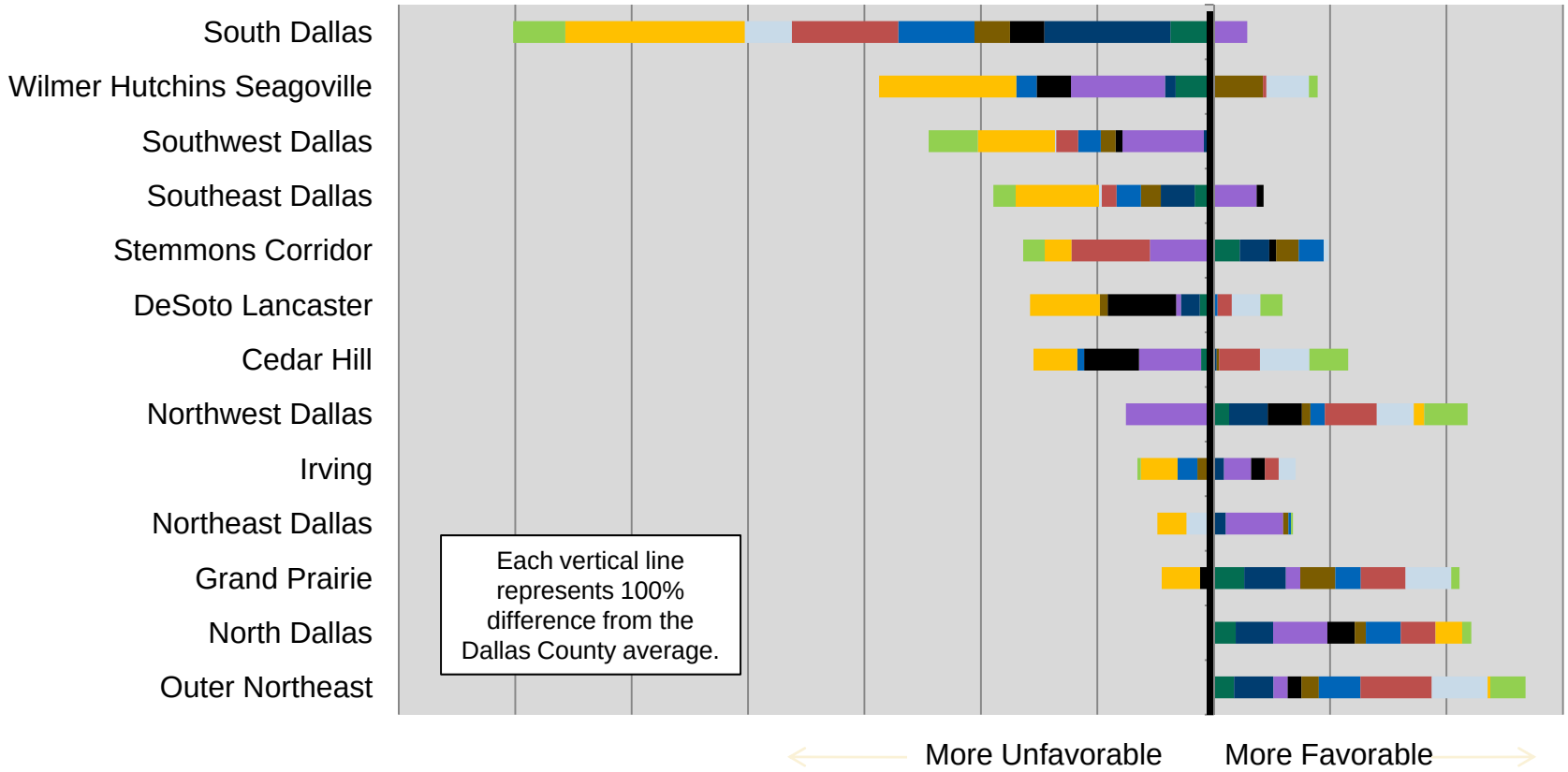


Cedar Hill Compared to Healthy People 2020 Goal	Cedar Hill Compared to Bench-mark Counties* (Quartiles)	Cedar Hill Compared to Past Years' Data (CI)
🔴	🔴	🟡
🔴	🔴	🟡
N/A	🟢	🔴
N/A	N/A	🟡
N/A	N/A	🟢
N/A	N/A	🟡
🔴	N/A	🟡

Summary – Model With Stoplight Pie Charts, Cedar Hill Service Area



Deviations from the Dallas County mean



NOTE: All data are from the years 2007-2010, years available varies by topic.

Methods of calculating deviations from the Dallas County mean for the preceding chart.

- **Mortality. For each service area and for Dallas County, add the 2009 age-adjusted death rates per 100,000 for the five leading causes of death, to get a single number. Calculate for each service area the percent deviation from the Dallas County total, from -infinity to +infinity. That deviation is the mortality deviation for the chart. Because heart disease and cancer predominate, this tends to over-weight these two causes compared to the other three (stroke, COPD and diabetes).**
- **Years of potential life lost. Using the Years of Potential Life Lost Rate per 100,000, calculate for each service area the percent deviation from the Dallas County YPLL rate, from -infinity to +infinity. That deviation is the YPLL deviation for the chart.**
- **Infant Mortality. Using the Infant mortality rate per 1,000 live births, calculate for each service area the percent deviation from the Dallas County infant mortality rate, from -infinity to +infinity. That deviation is the infant mortality deviation for the chart.**
- **Very Low Birth Weight. Using the Very Low Birth Weight rate per 1,000 live births, calculate for each service area the percent deviation from the Dallas County VLBW rate, from -infinity to +infinity. That deviation is the VLBW deviation for the chart.**
- **Morbidity. For each service area and for Dallas County, add the 2009 incidence rates per 100,000 for the four reportable diseases (aseptic meningitis, cryptosporidiosis, pertussis, salmonellosis), to get a single number. Calculate for each service area the percent deviation from the Dallas County total, from -infinity to +infinity. That deviation is the morbidity deviation for the chart. Meningitis and salmonellosis are more common, so this tends to over-weight them, although all are fairly rare in a population sense.**
- **Violence and Injury. Three steps:**
  - For each service area and for Dallas County, add the 2009 age-adjusted death rates for the injury-related causes of death (motor vehicle crashes, poisoning, falls, suicide and homicide) and the age-specific seniors falls death rate (all of which are in units of deaths per 100,000), to get a single number. Calculate for each service area the percent deviation from the Dallas County total, from -infinity to +infinity.
  - Then using the rate per 100,000 of ED visits for injuries, calculate for each service area the percent deviation from the Dallas County rate, from -infinity to +infinity.
  - Calculate the arithmetic mean of these two percent deviations. That is the Violence and Injury deviation for the chart. This might over-weight ED visits somewhat, but it is qualitatively different from mortality.

Methods of calculating deviations from the Dallas County mean for the preceding chart.

- **High Risk Sexual Behavior. Three steps:**
  - For each service area and for Dallas County, add the 2009 incidence rates for three non-HIV STDs (Chlamydia, gonorrhea and syphilis), to get a single number in units of cases per 100,000. Calculate for each service area the percent deviation from the Dallas County total, from -infinity to +infinity.
  - Then using the rate of new HIV diagnoses per 100,000, calculate for each service area the percent deviation from the Dallas County rate, from -infinity to +infinity.
  - The using the rate of births to girls 15-17, per population of girls 15-17, calculate for each service area the percent deviation from the Dallas County rate, from -infinity to +infinity.
  - Calculate the arithmetic mean of these three percent deviations. That is the High Risk Sexual Behavior deviation for the chart. This might under-weight syphilis somewhat. By giving the three equal statistical weight (STDs, HIV and teen births) you could set off debates over which has the most impact over harm to the area's health status, but since they are qualitatively quite different we probably can't resolve that to everyone's satisfaction.
- **Access to Clinical Care. For each service area and for Dallas County, add the 2010 percent of people without health insurance and rate of non-emergent ED user per 1000 population, then subtract the rate of primary care physicians per 100,000 population (since higher is better for this measure), to get a single number. Calculate for each service area the percent deviation of this total from the Dallas County total, from -infinity to +infinity. That deviation is the access to care deviation for the chart. Although these three measures are in different units, the values were in the range of 5-130 (in different units), such that the contributions of each of the three measures to the total was approximately equal.**
- **Quality of Clinical Care. There are 12 preventable hospitalization discharge rates for each service area, age-adjusted in units of discharges per 100,000. Some are more common, such as bacterial pneumonia (in the range of 100-400 discharges per 100,00), while some are more rare (around 5-10 per 100,000). So for each service area and for Dallas County, for each discharge category calculate the percent deviation from the Dallas County rate. Calculate the arithmetic average of these 12 deviations, that deviation is the quality of care deviation for the chart.**
- **Socioeconomic indicators. There are four socioeconomic indicators—percent age 65 or older, percent age birth to 14, percent of adults age 25+ without a high school diploma, percent of the population below the federal poverty limit. For each service area and for Dallas County, for each of these four indicators calculate the percent deviation from the Dallas County rate. Calculate the arithmetic average of these four deviations, that deviation is the socioeconomic deviation for the chart.**

Parkland

Notes:

- **Age Adjusted Death Rates: Death rates that control for the effects in population age distributions. The centers for Disease Control and Prevention established the standard population weights for direct age adjustments. The need for age adjustment becomes particularly important when cause-specific mortality is of interest. Unadjusted rates for chronic diseases (cardiovascular diseases, cancers, or chronic lower respiratory diseases) may appear to be higher for older populations when compared to a younger population. With age-adjustment those differences may be reduced or even reversed. A mechanism for adjusting the age structure differences is needed to determine if there really are mortality differences between two populations. By applying age-specific mortality rates to a standard population, direct standardization controls for differences in population composition. Mortality trends can be more accurately compared along geographic, temporal, or race/ethnicity lines, etc. In short, standardization lets us look at what the death rate would be in one population if that population had the same age structure as the standard population. Beginning with 1999 events, the United States year 2000 population is used as the standard for age-adjusting.**