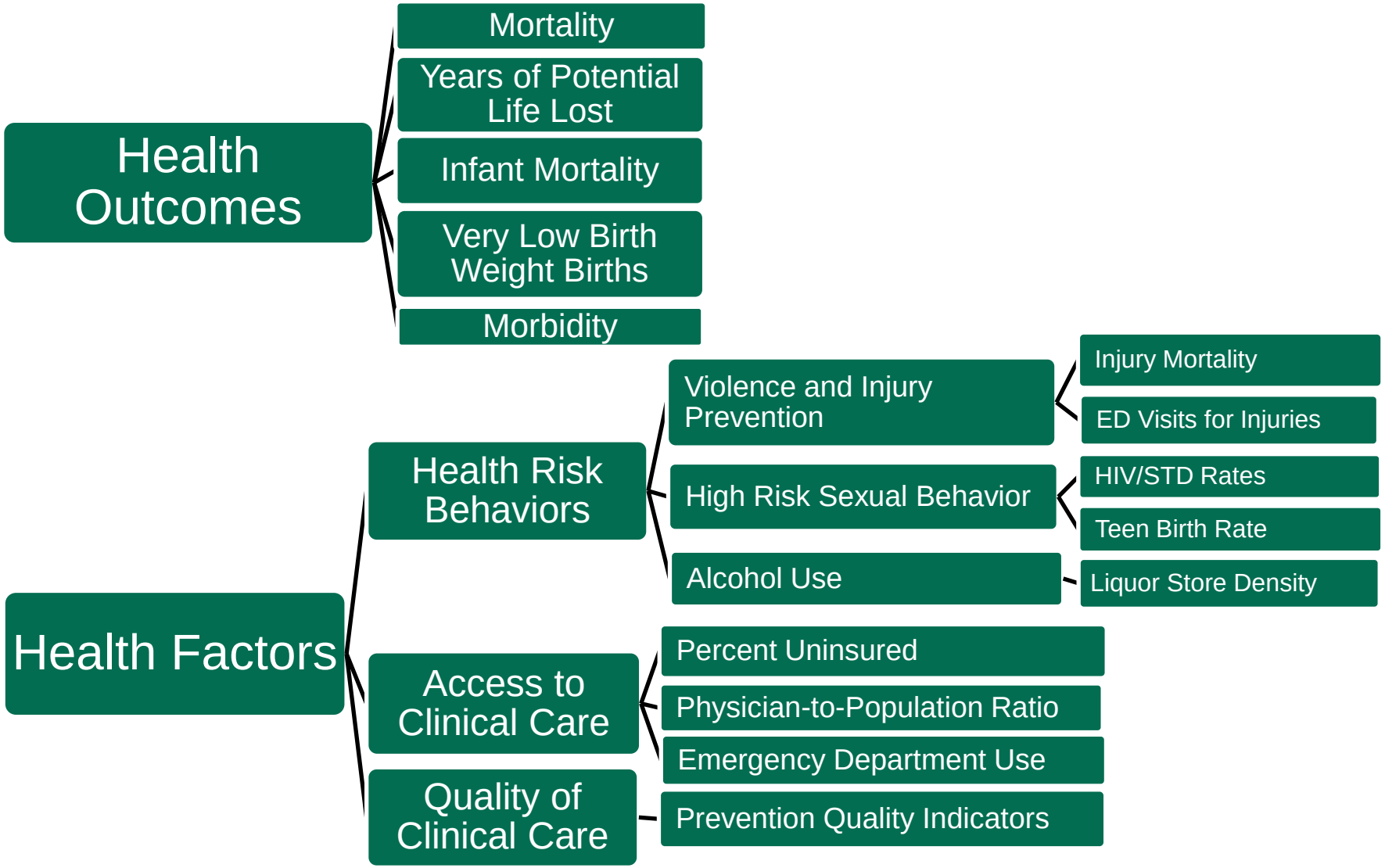
# Community Health Assessment

*North Dallas Service Area*

Parkland

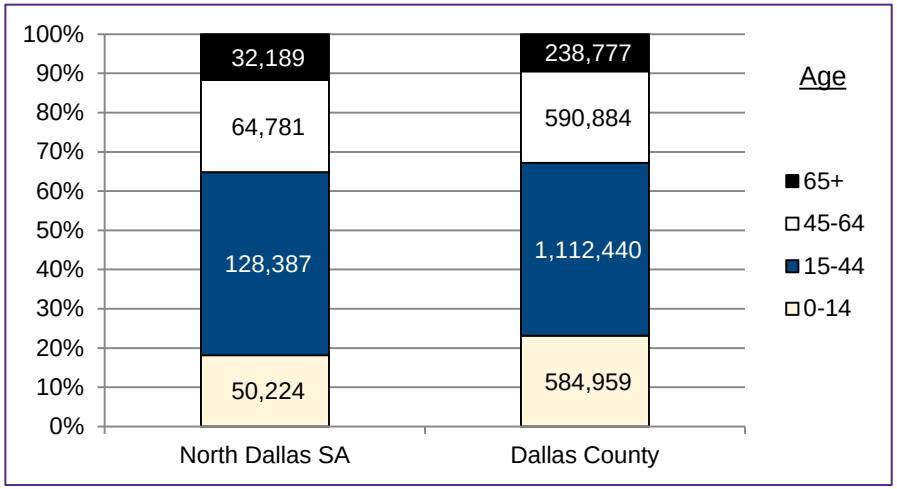
# Organizational Model For the Community Health Dashboard

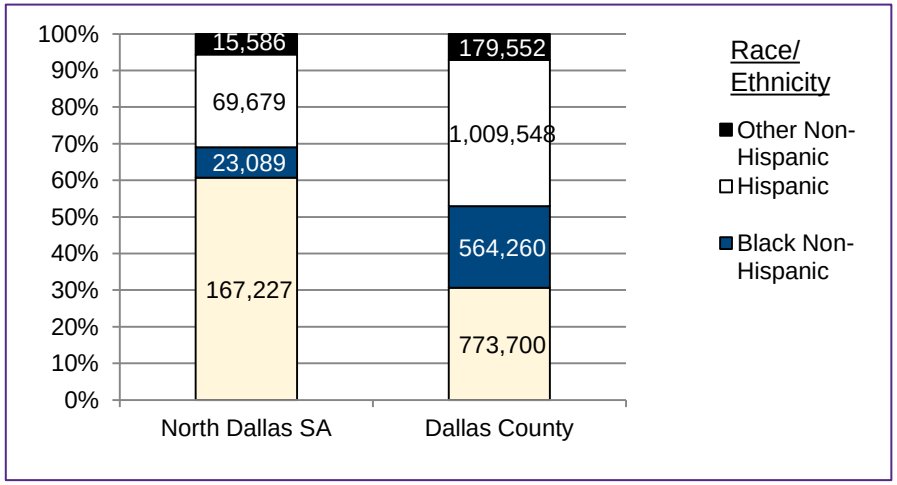


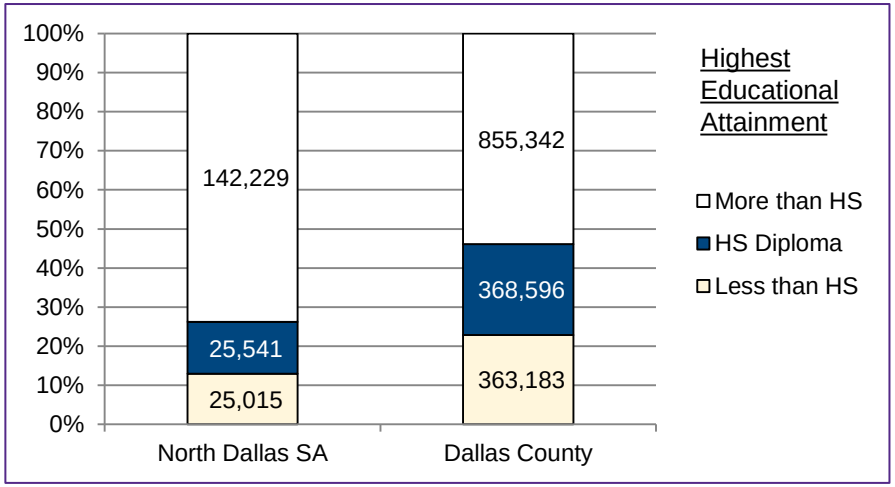
# Demographic Profile

*North Dallas Service Area, 2012*

- **The population of the North Dallas Service Area is older (11.7% age 65 and over) than the county population (9.5% age 65 and over).**
- **The service area is one of the three Dallas County service areas that is majority white (60.7%).**
- **The North Dallas Service Area has the second highest percentage of people age 25 and older with a high school education or more (73.8%) of the 13 service areas.**



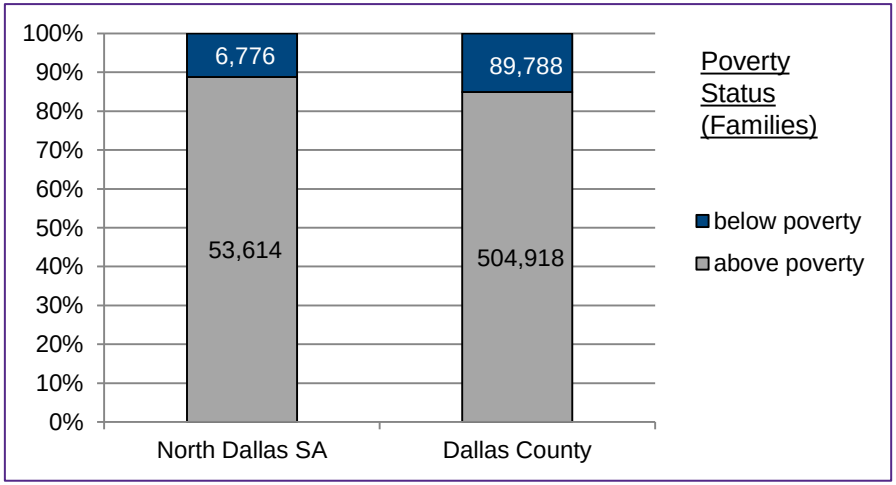


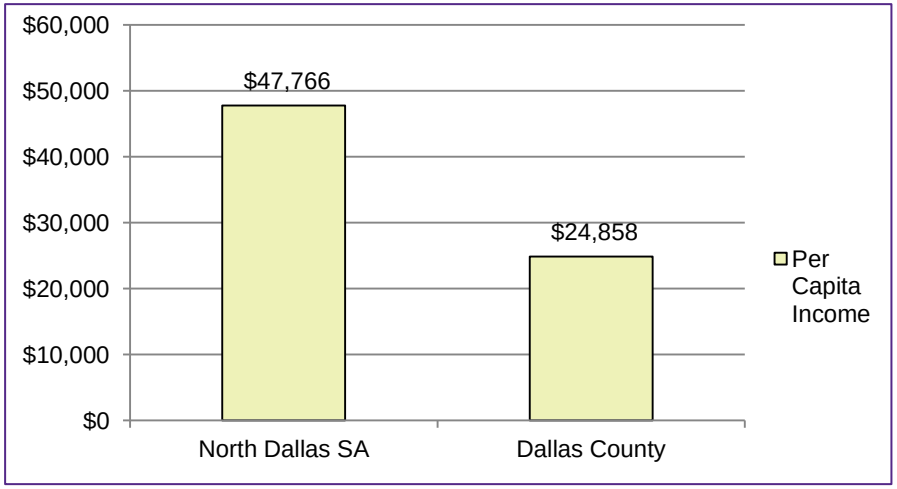

Source: Nielson/Claritas Pop-Facts 2013 version

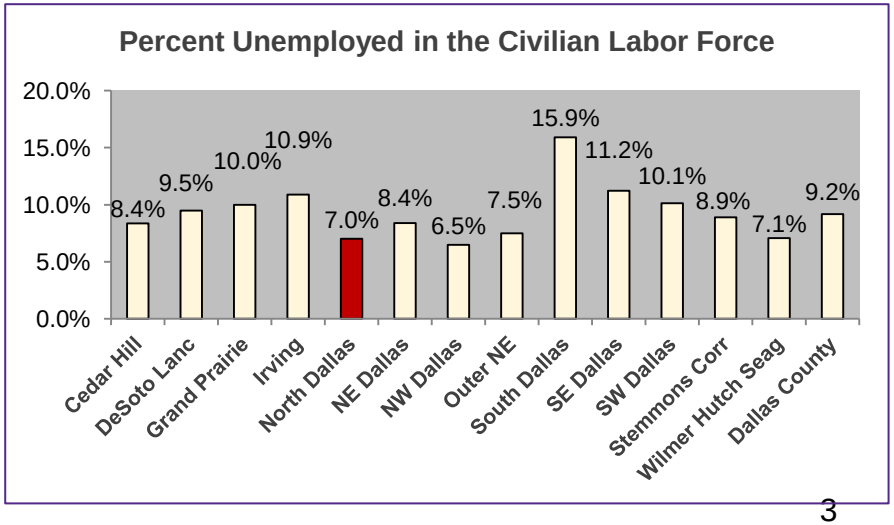
# Demographic Profile

*North Dallas Service Area, 2011*

- **The North Dallas Service Area has a lower percentage of families in poverty (11.2%) than Dallas County as a whole (15.1%).**
- **The Service Area's per capita income ($47,766) was the highest of the 13 service areas.**
- **This Service Area ranks third in unemployment compared to the other 13 Service Areas.**



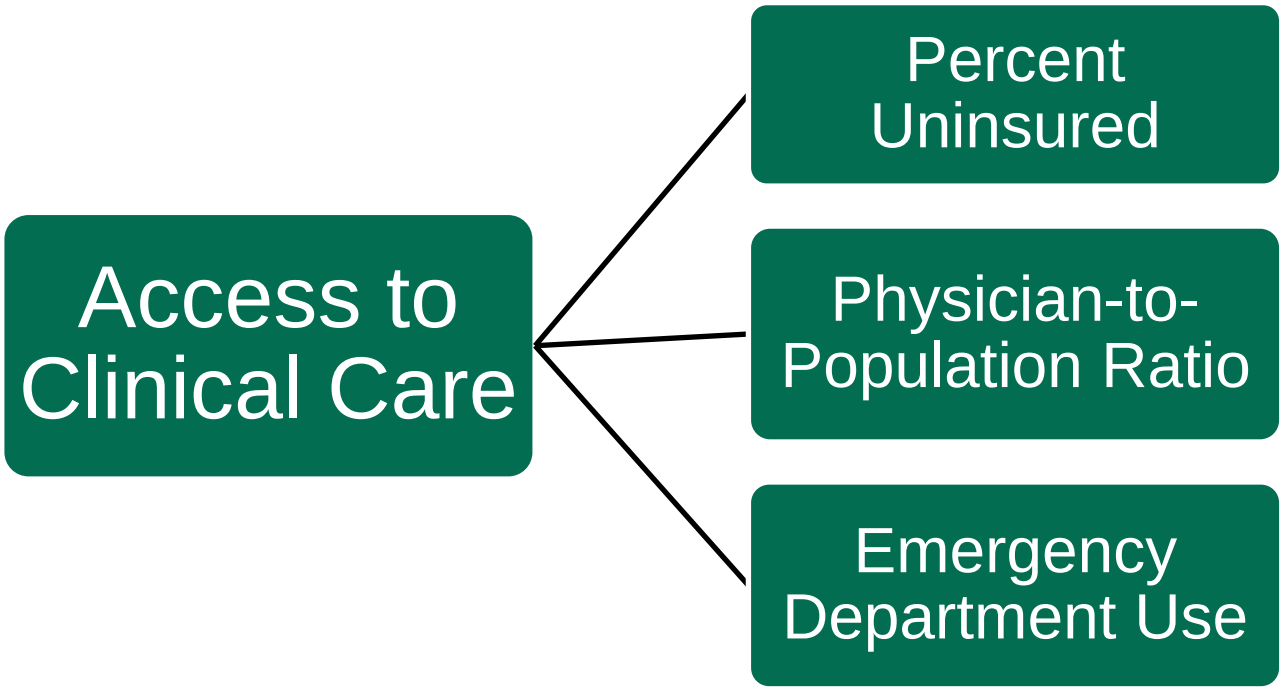




**Source: Nielson/Claritas Pop-Facts 2013 version**

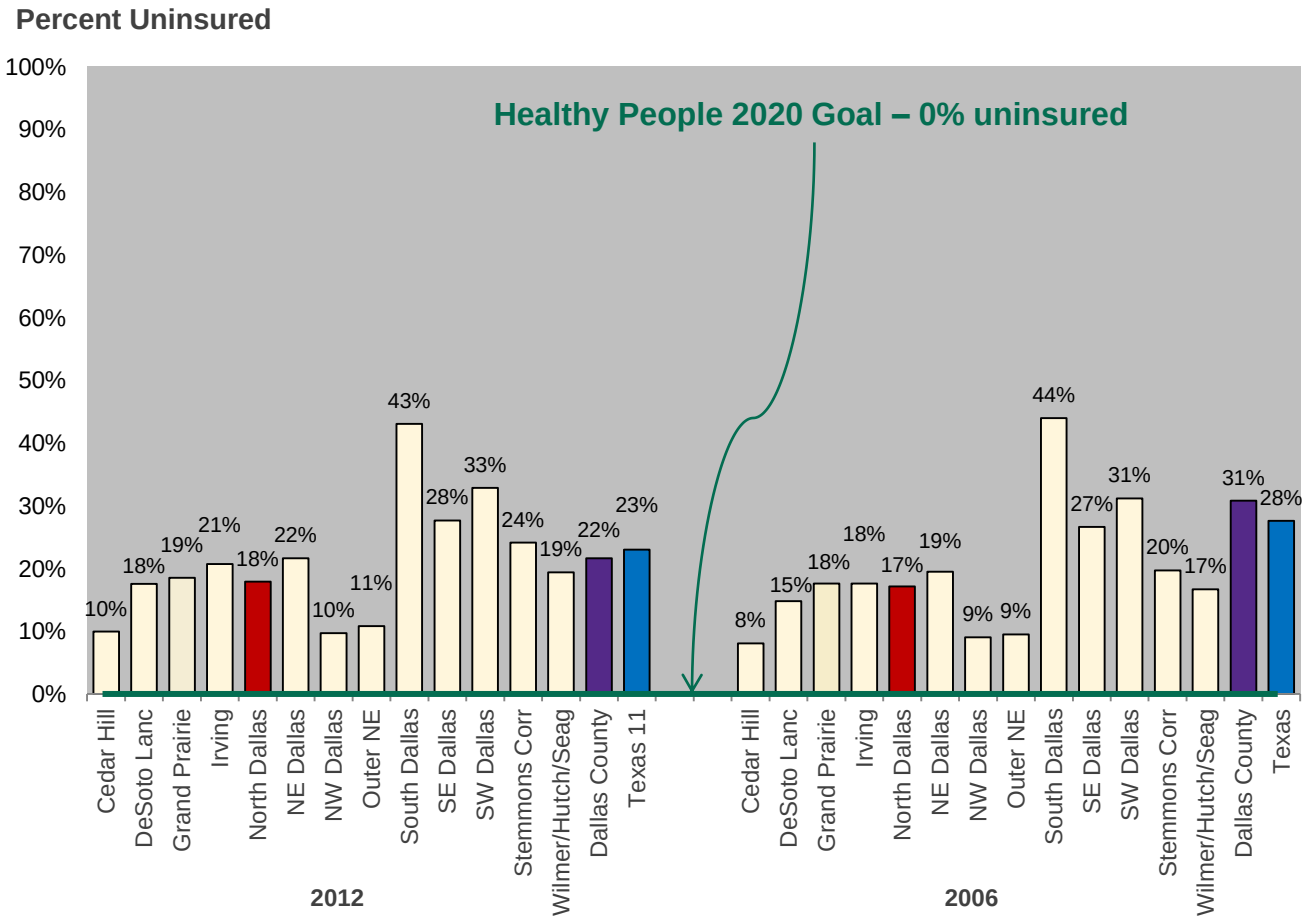
Parkland

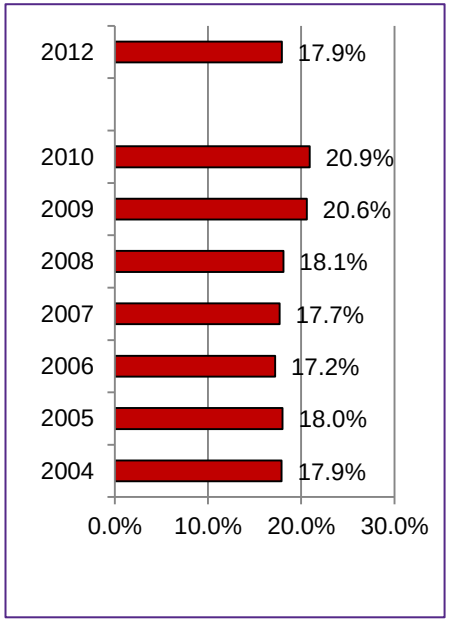
# Access to care



# Access to Healthcare: Percent Without Healthcare Insurance

*North Dallas Service Area*

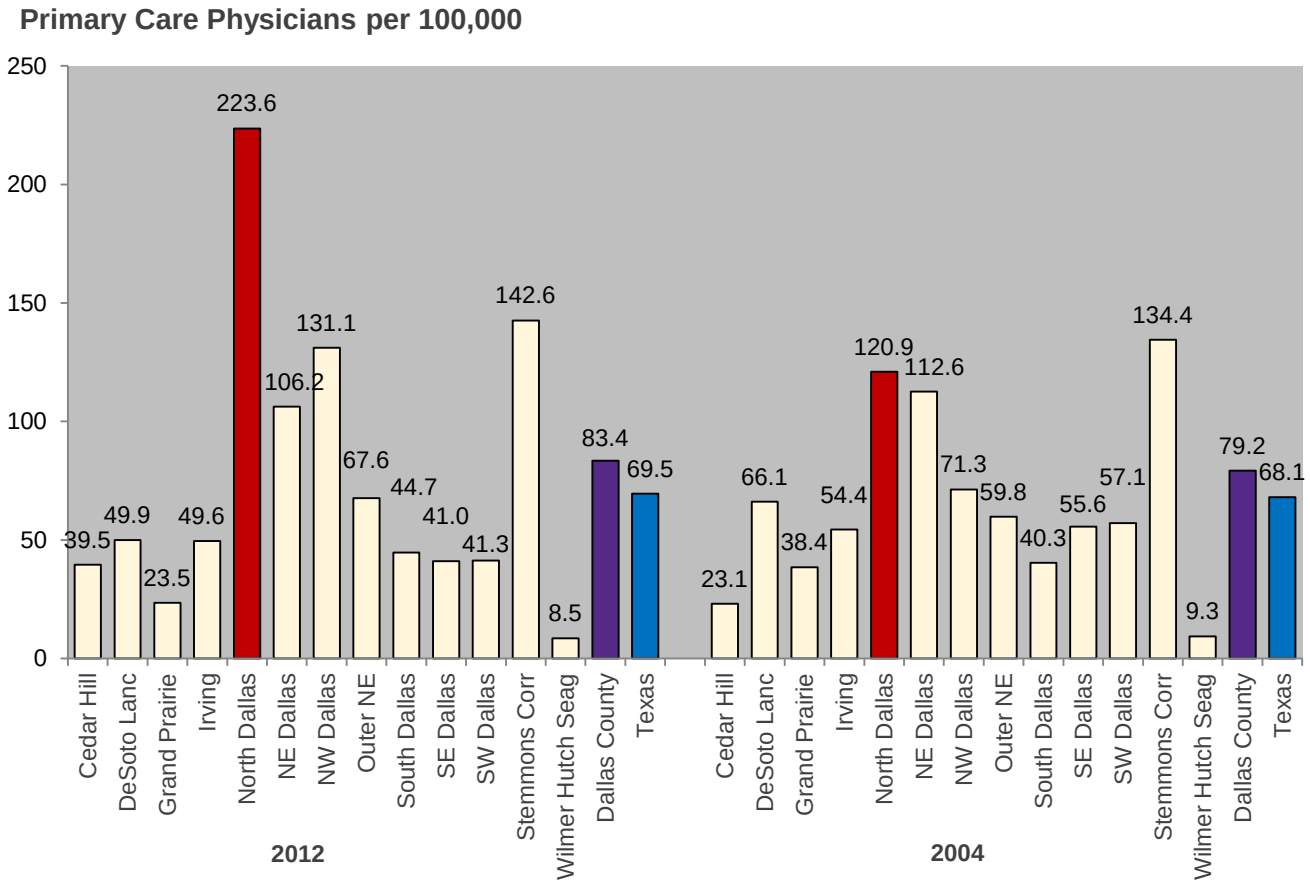


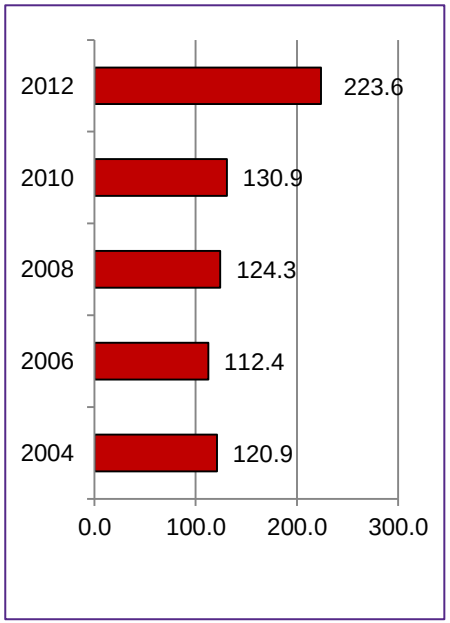




Source: 2012 Truven Analytics, Inc. Denominator population data from Claritas, Inc.; Texas rate from US Census Bureau's American Community Survey 2011; 2006 Solucient, Inc.

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

*North Dallas Service Area*



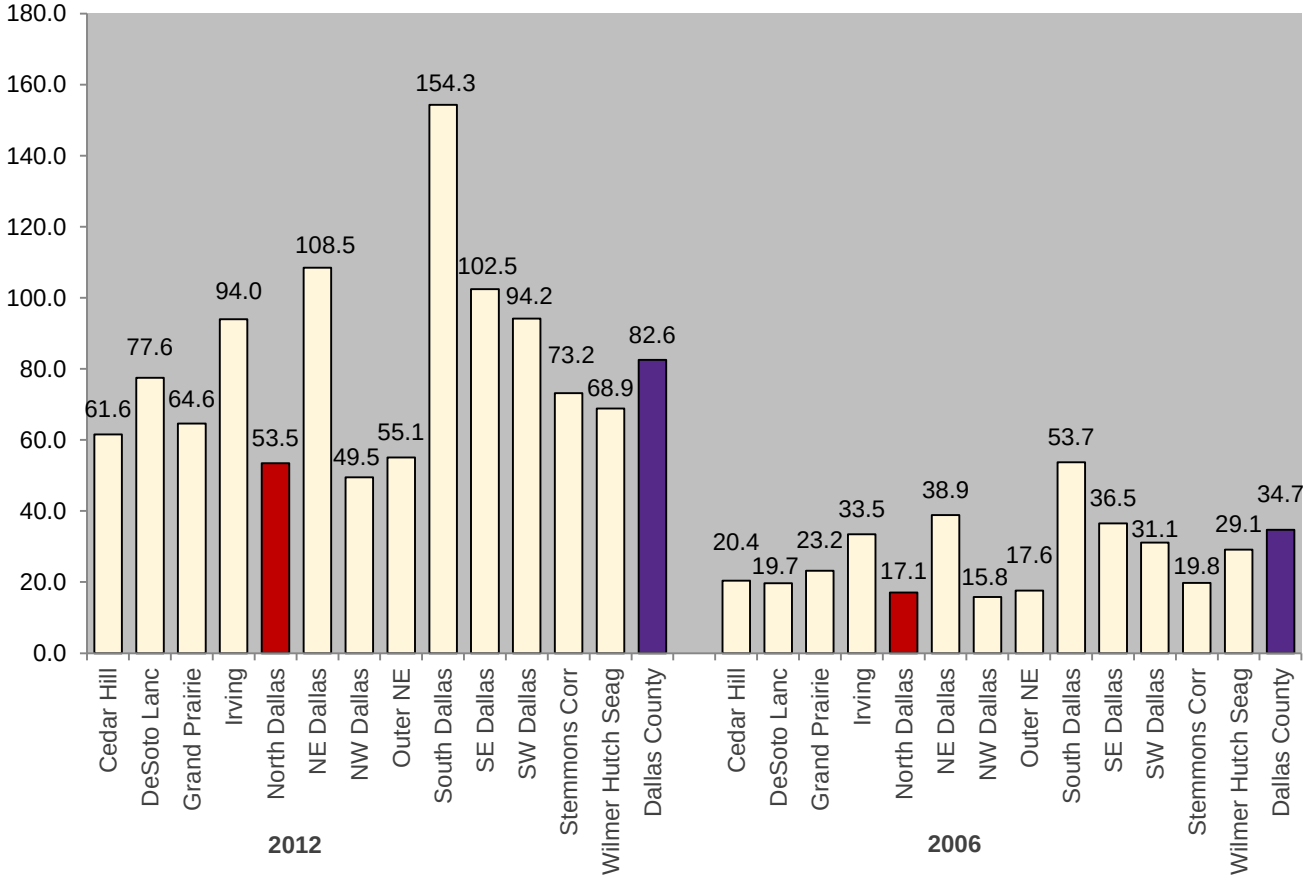




Source: Texas Medical Association Physician Practice Address files; denominator population data from Claritas, Inc., except 2010 from Nielson/Claritas, Inc. Pop Facts. Mid 2010 version.
County and State source is Texas Bureau of Primary Care.

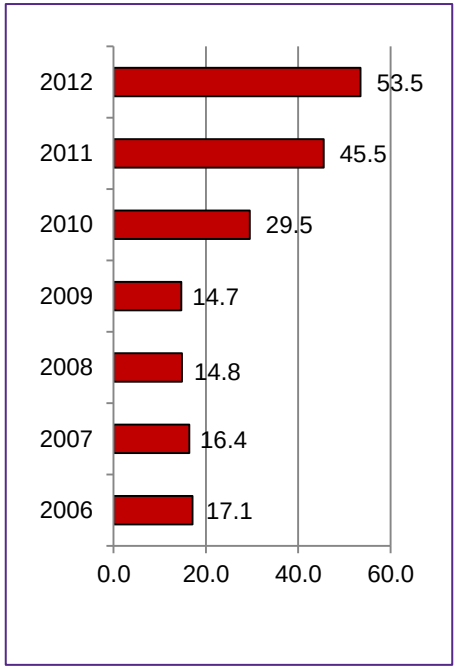
# Access to Healthcare: Non-Emergent ED Utilization

*North Dallas Service Area*

**Non-Emergent ED Visits, per 1,000 Population**



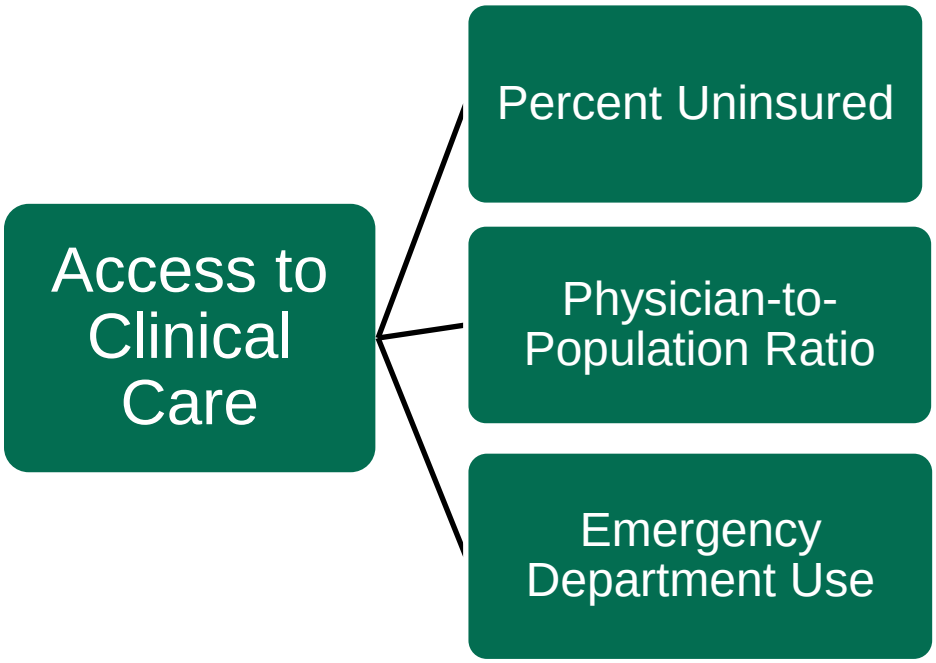

**Rate of Non-Emergent ED Visits, per 1,000, North Dallas Service Area**




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

# Access to Care

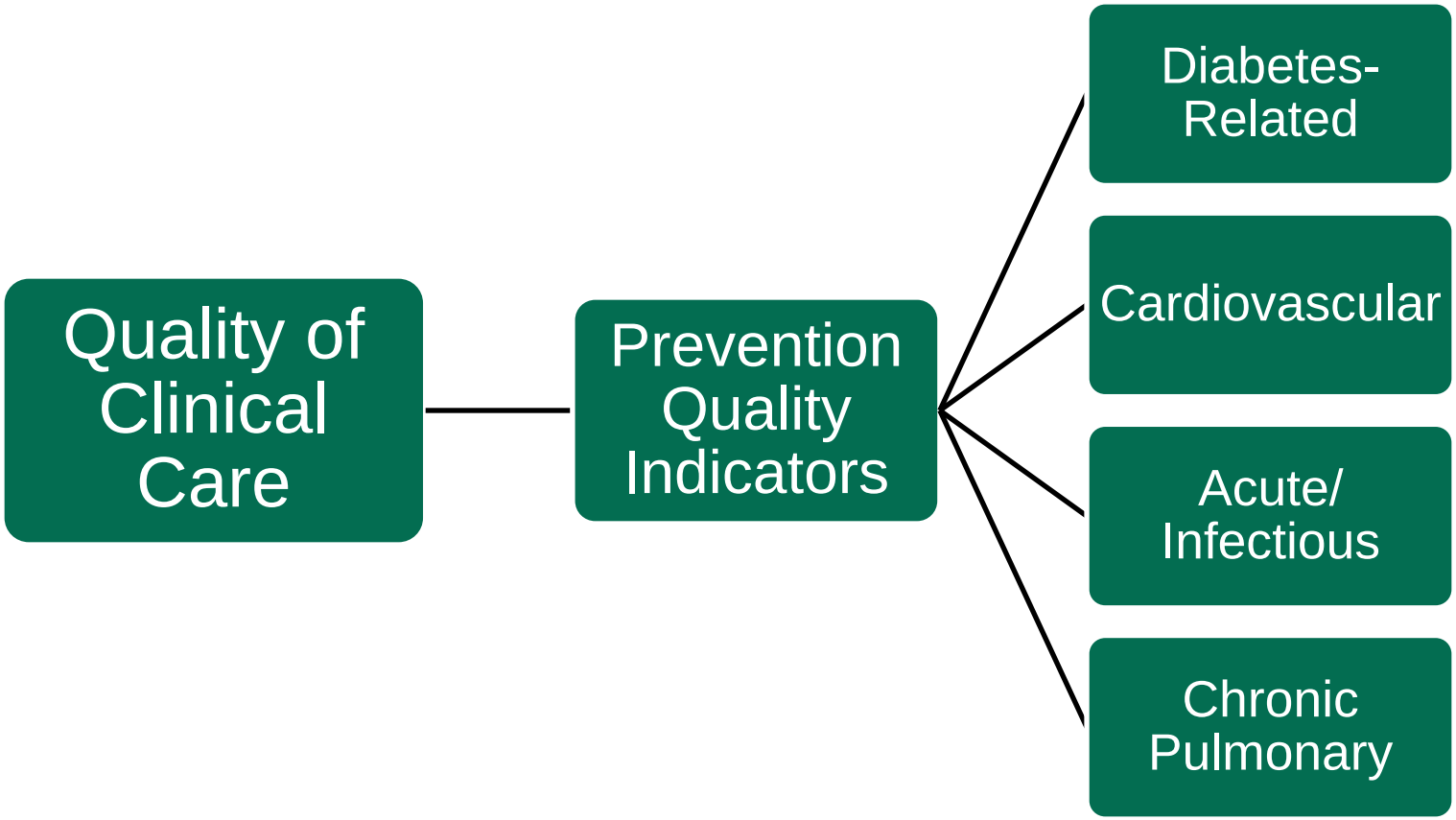
– Doing better than the benchmark
– Same as/not significantly different from the benchmark
– Worse than the benchmark



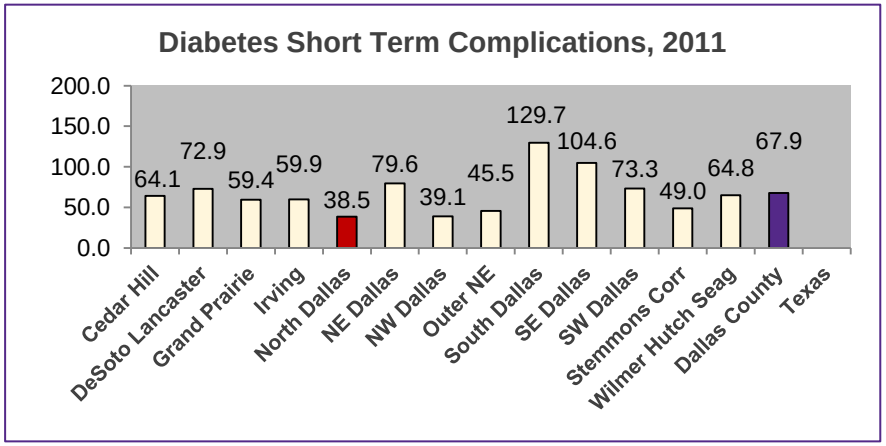

| North Dallas Compared to Healthy People 2020 Goal | North Dallas Compared to Other Service Areas (Quartiles) | North Dallas Compared to Past Years' Data (CI) |
|---|---|---|
| | | |
| N/A | | |
| N/A | | |

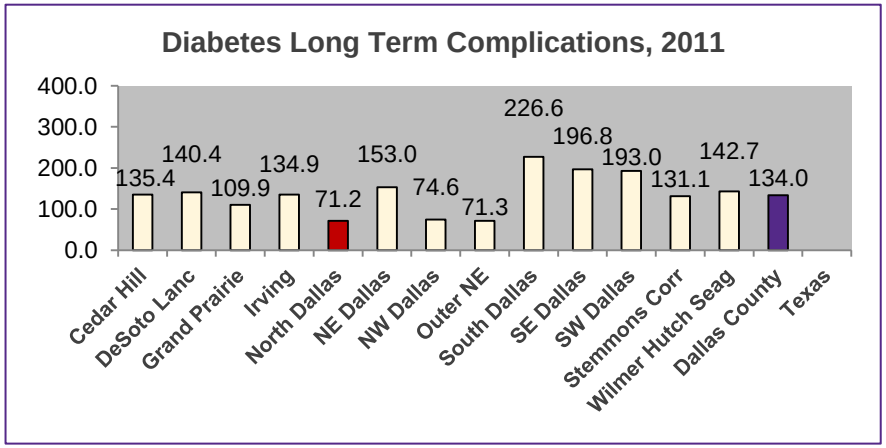
Parkland

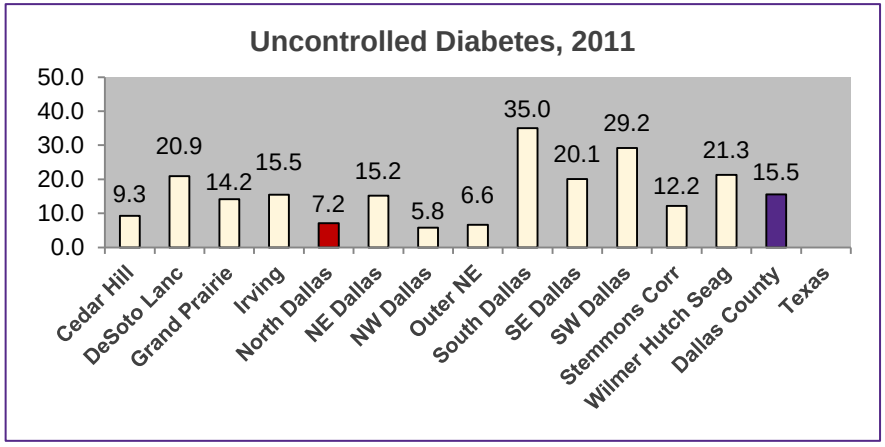
# Quality of care

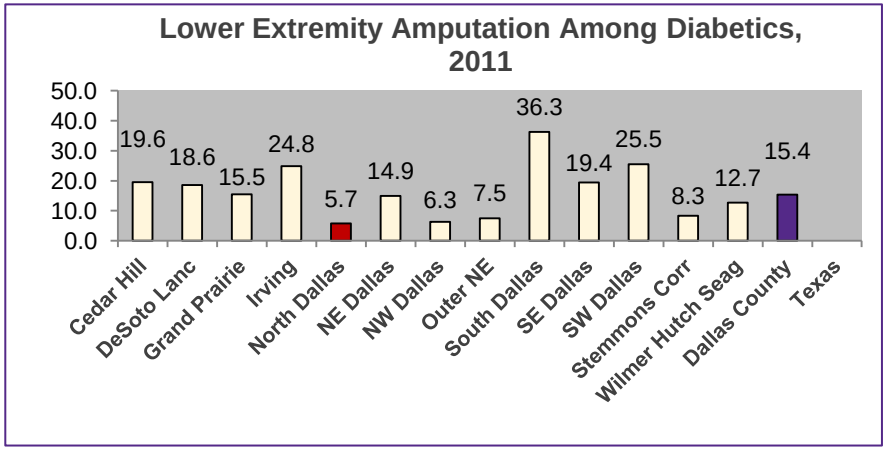


# Healthcare Quality: Rate of Preventable Hospitalizations, 2011
## Diabetes-Related Hospitalizations
### *North Dallas Service Area*



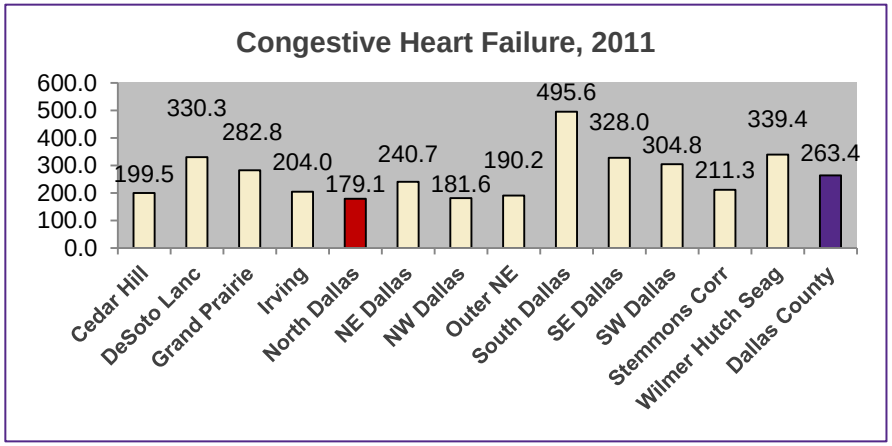



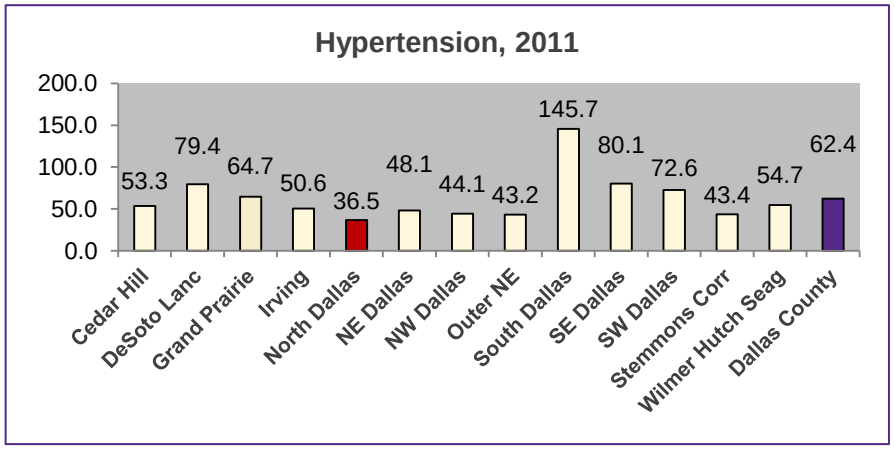



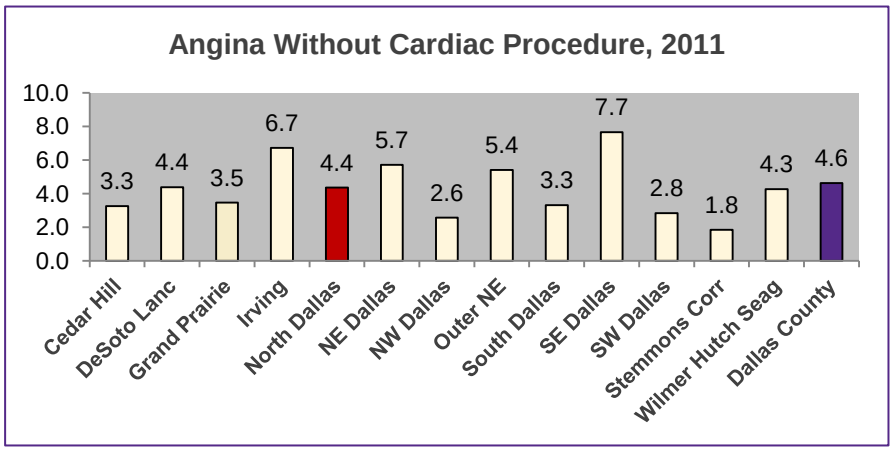




**Source: Texas Department of State Health Services, Texas Health Care Information Council, unpublished data; denominator population data from US Census American Community Survey**

# Healthcare Quality: Rate of Preventable Hospitalizations, 2011
## Cardiovascular Disease Hospitalizations
### *North Dallas Service Area*

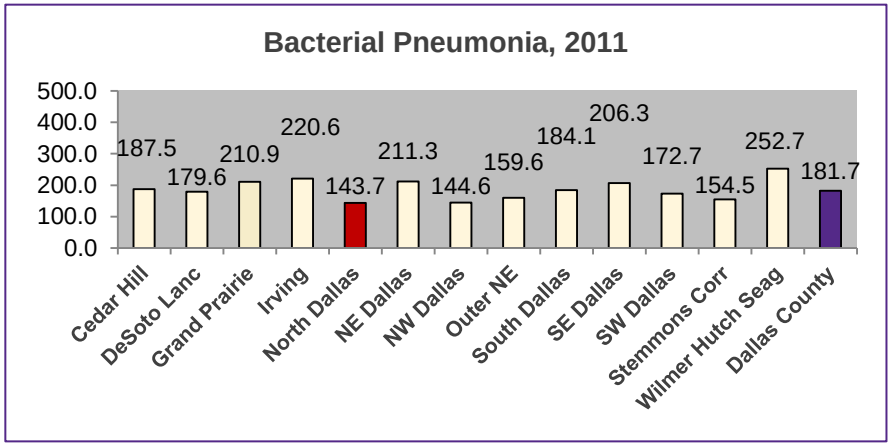


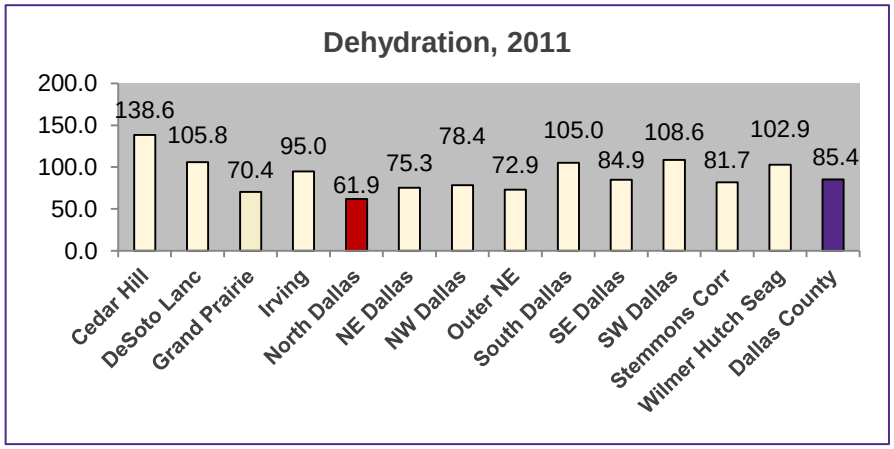



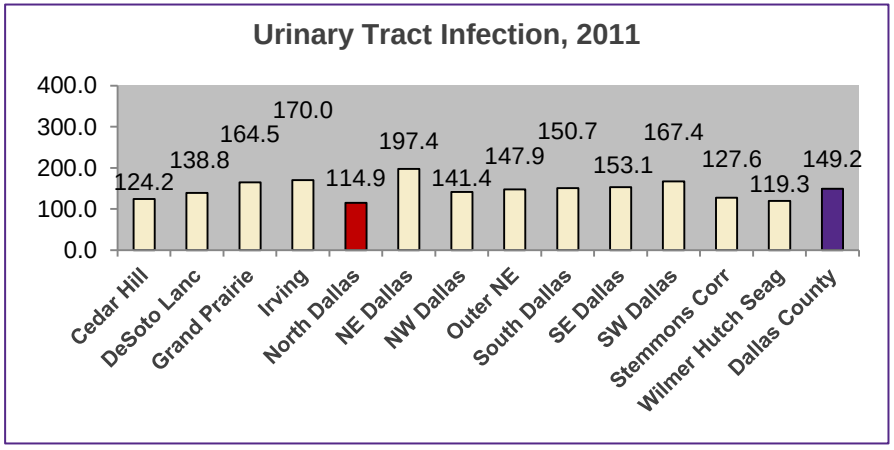




Source: Texas Department of State Health Services, Texas Health Care Information Council, unpublished data; denominator population data from US Census American Community Survey

# Healthcare Quality: Rate of Preventable Hospitalizations, 2011
## Acute/Infectious Disease Hospitalizations
### *North Dallas Service Area*



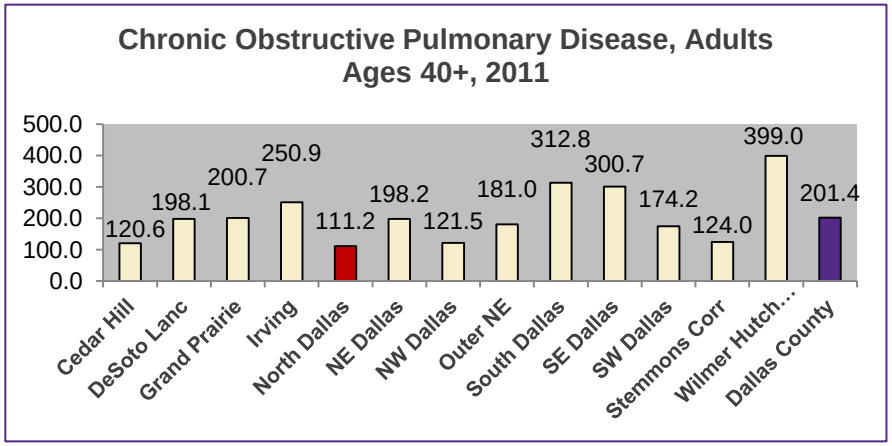



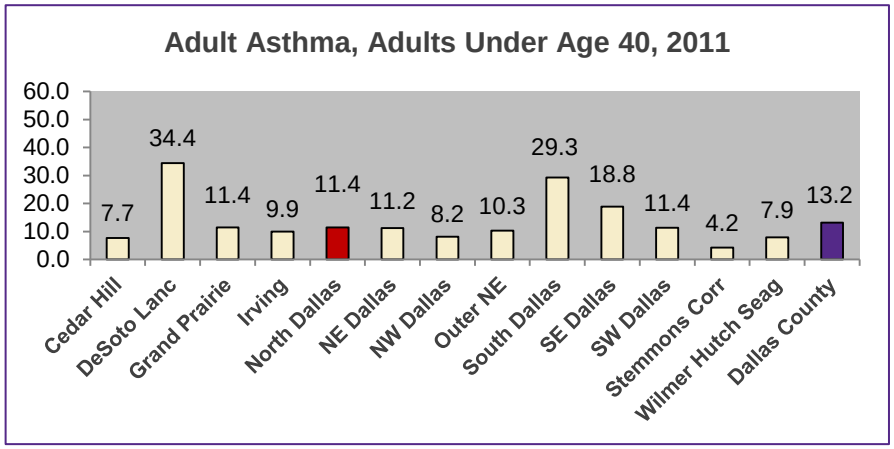

**Source: Texas Department of State Health Services, Texas Health Care Information Council, unpublished data; denominator population data from US Census American Community Survey**

# Healthcare Quality: Rate of Preventable Hospitalizations, 2011

## Chronic Pulmonary Disease Hospitalizations

*North Dallas Service Area*

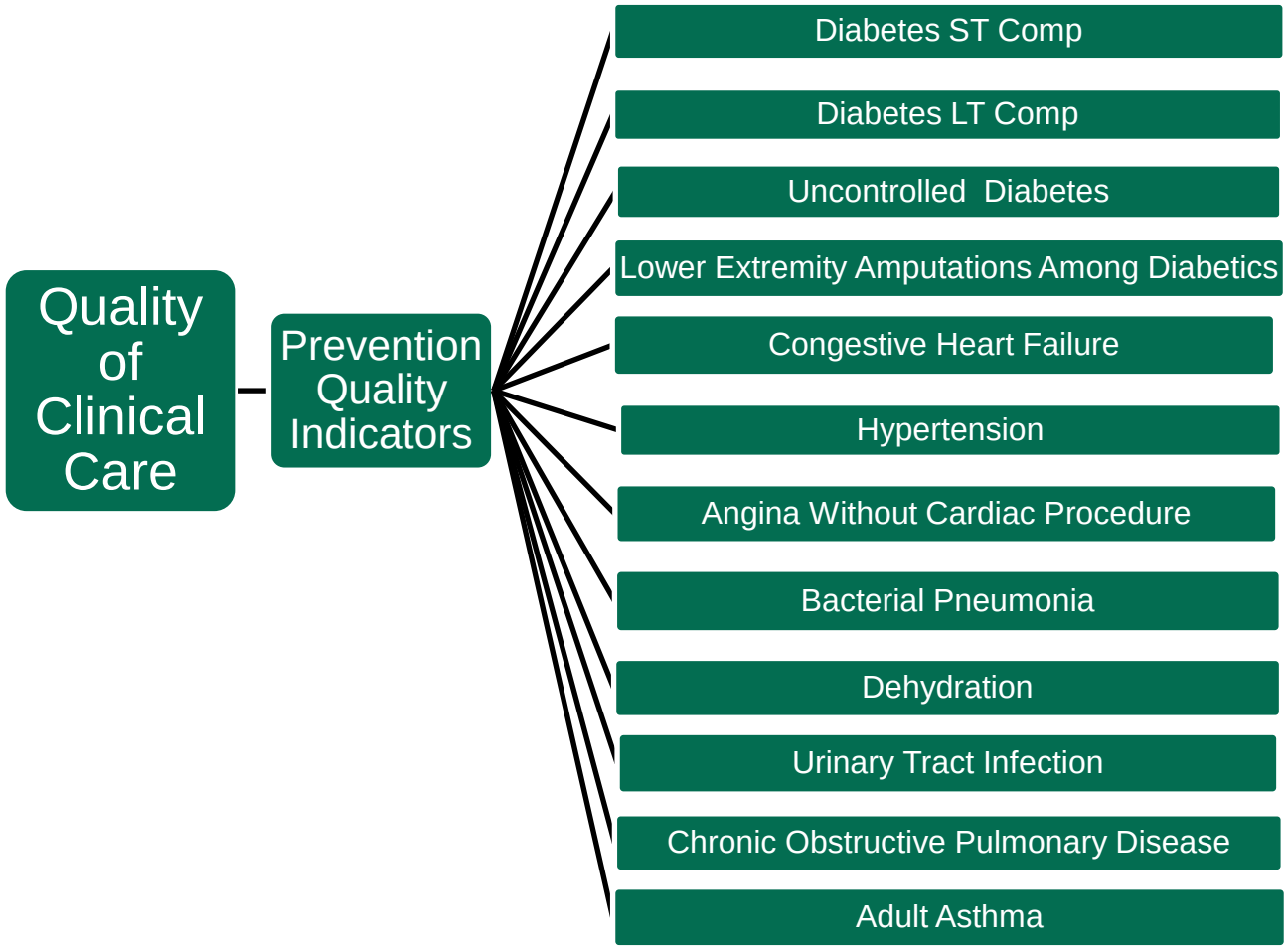



**Source: Texas Department of State Health Services, Texas Health Care Information Council, unpublished data; denominator population data from US Census American Community Survey**

# Healthcare Quality

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




| North Dallas Compared to 12 Other Service Areas (Quartiles) | North Dallas Compared to Past Years' Data (Percent Change vs. 2010) |
|---|---|
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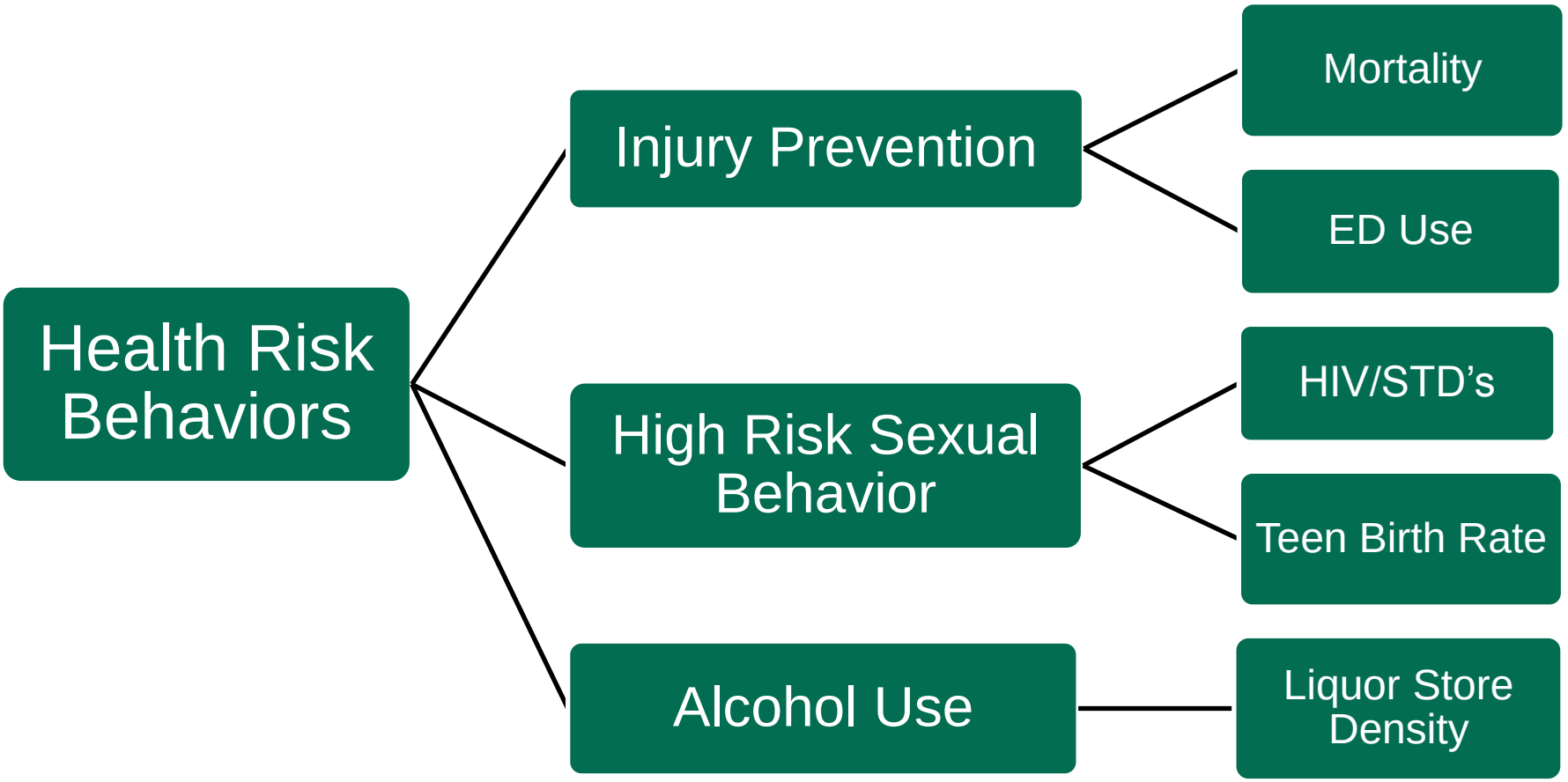
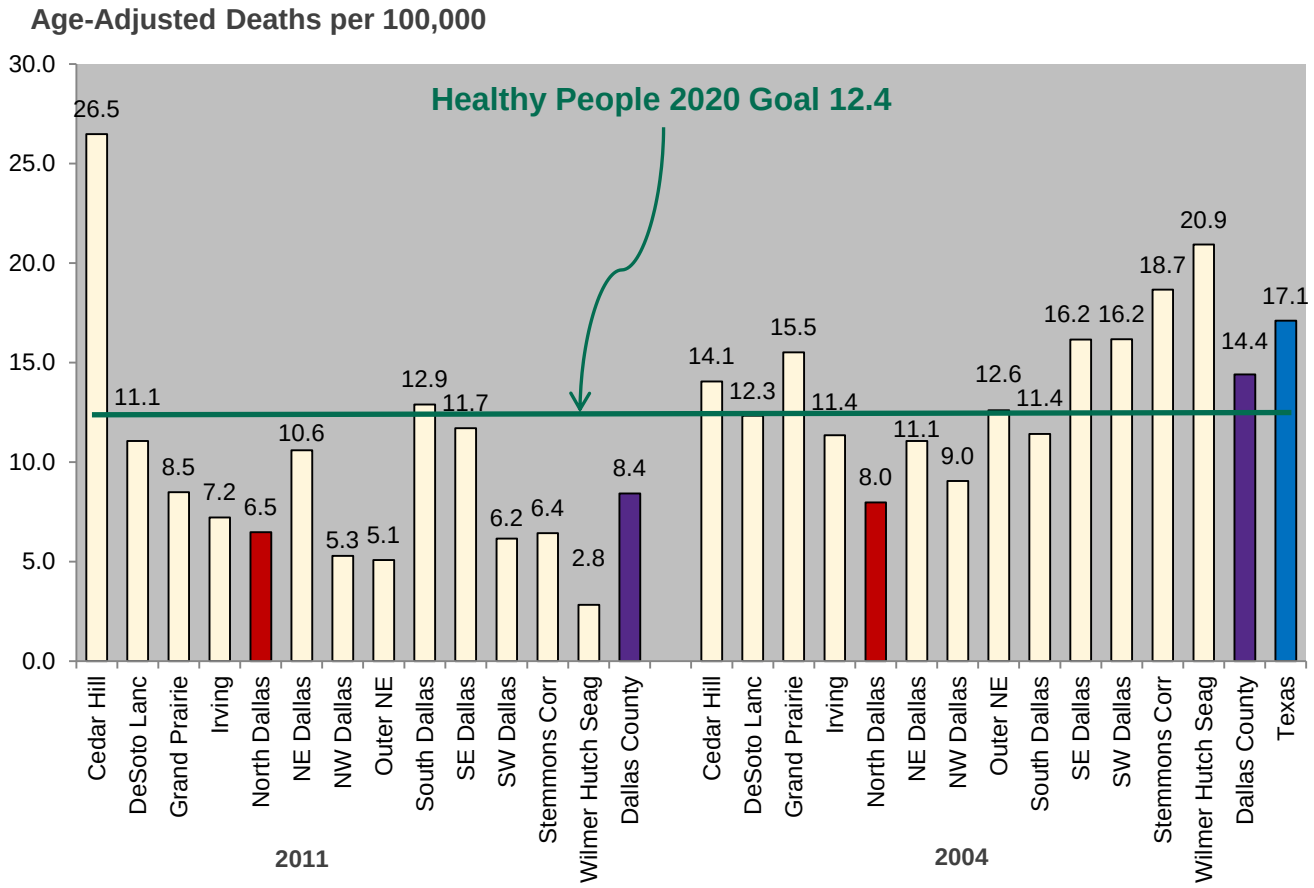
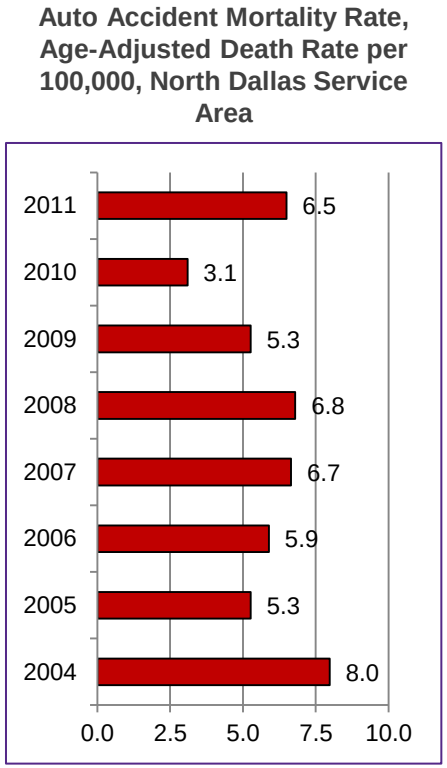
# Health Risk Behaviors



# Risk Factors: Auto Accident Mortality Rates

*North Dallas Service Area*

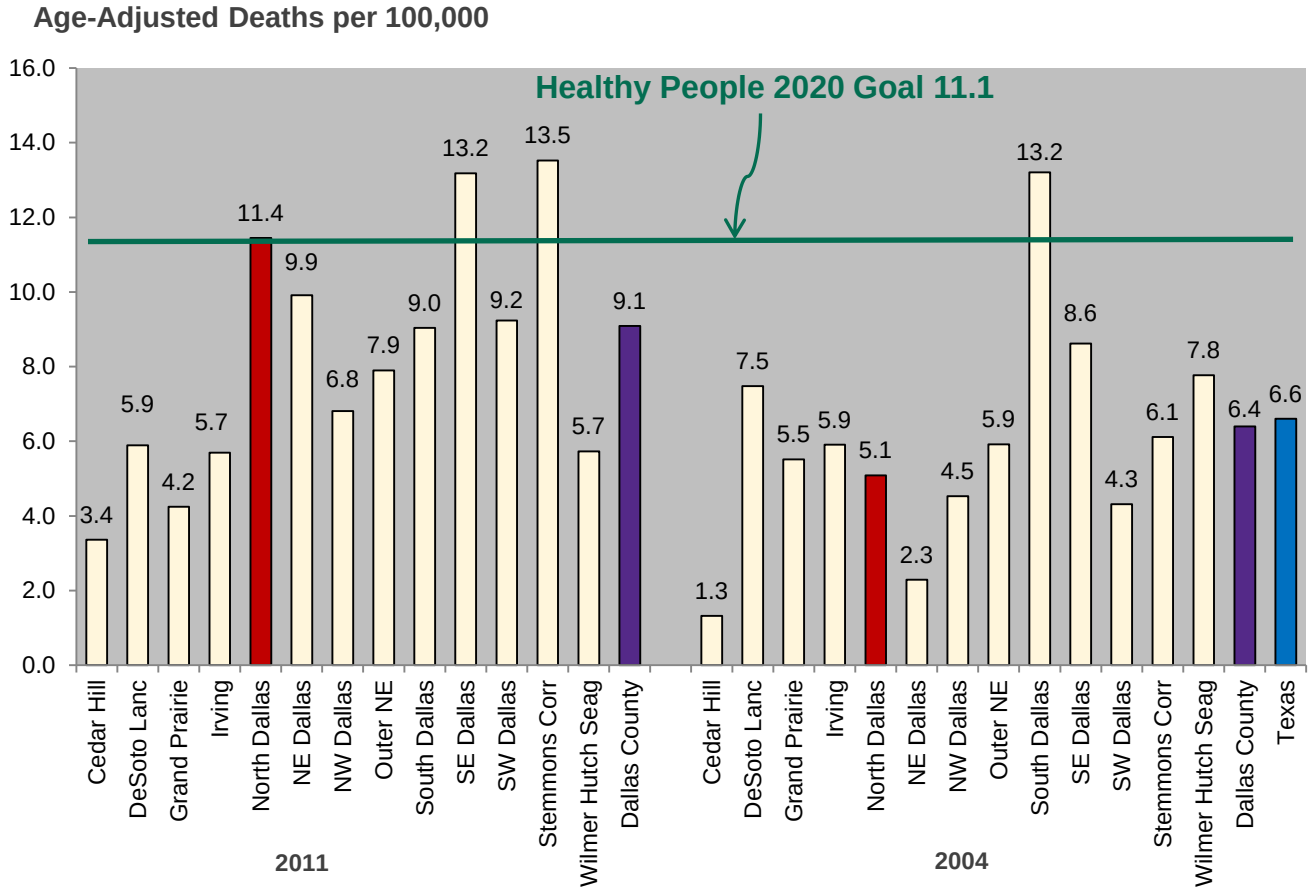


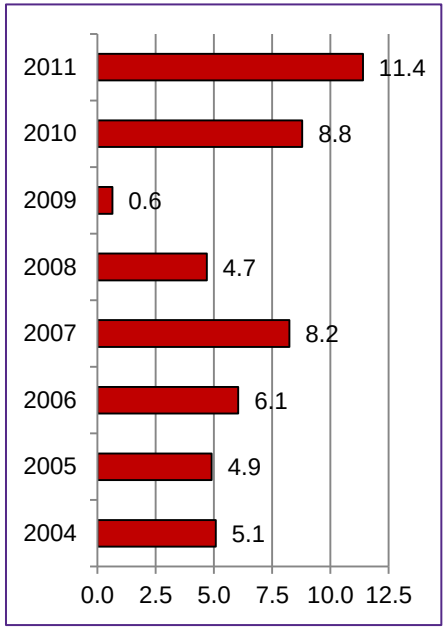




Source: Texas Department of State Health Services, Bureau of Vital Statistics; denominator population data from US Census American Community Survey.

# Risk Factors: Accidental Poisoning Mortality Rates

*North Dallas Service Area*

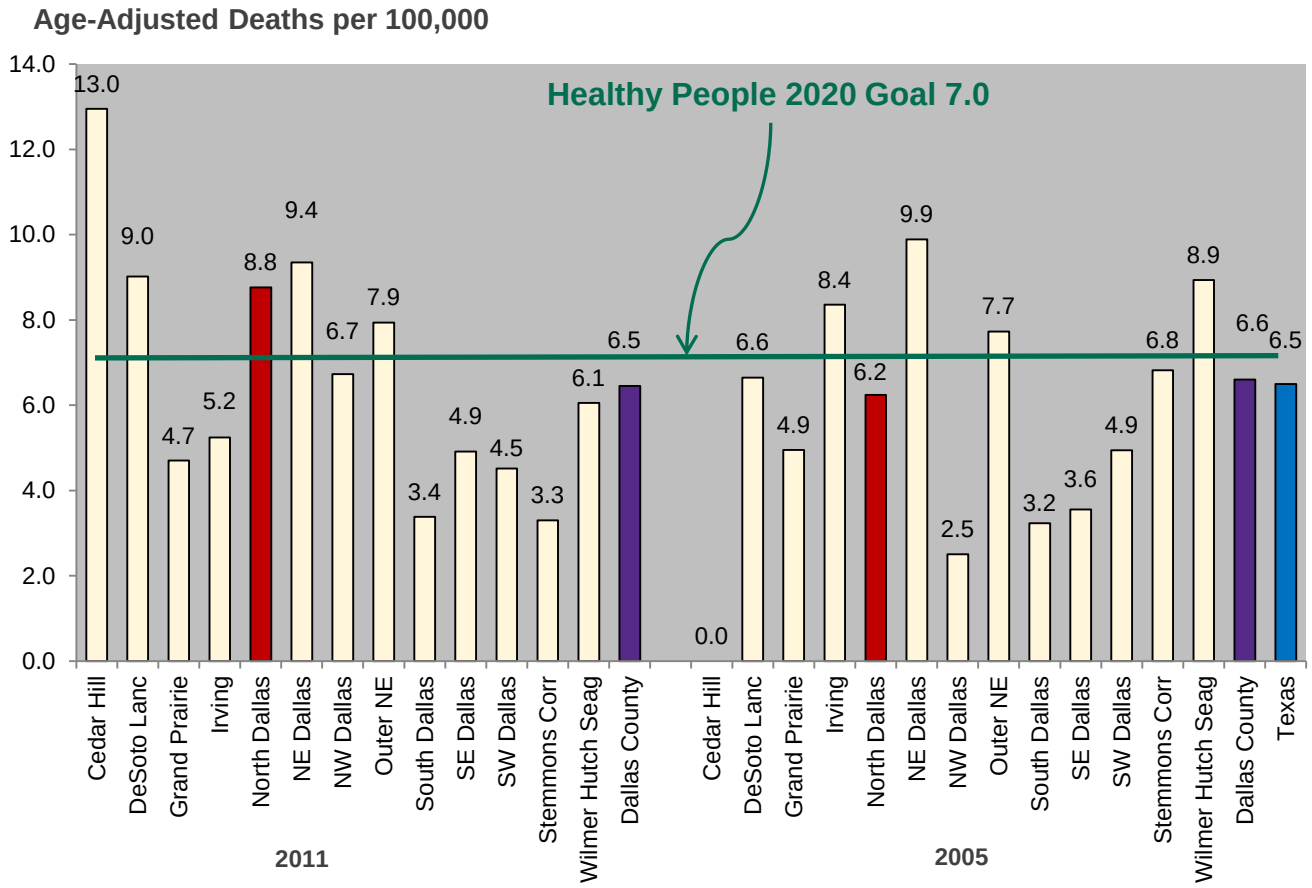


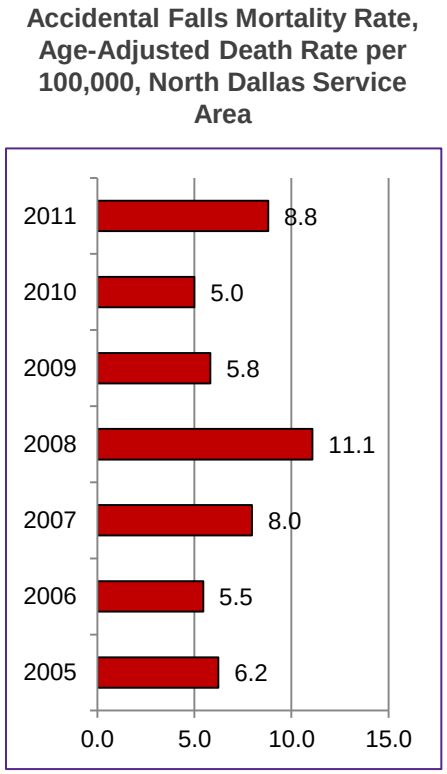




Source: Texas Department of State Health Services, Bureau of Vital Statistics; denominator population data from US Census American Community Survey.

# Risk Factors: Accidental Falls Mortality Rates

*North Dallas Service Area*



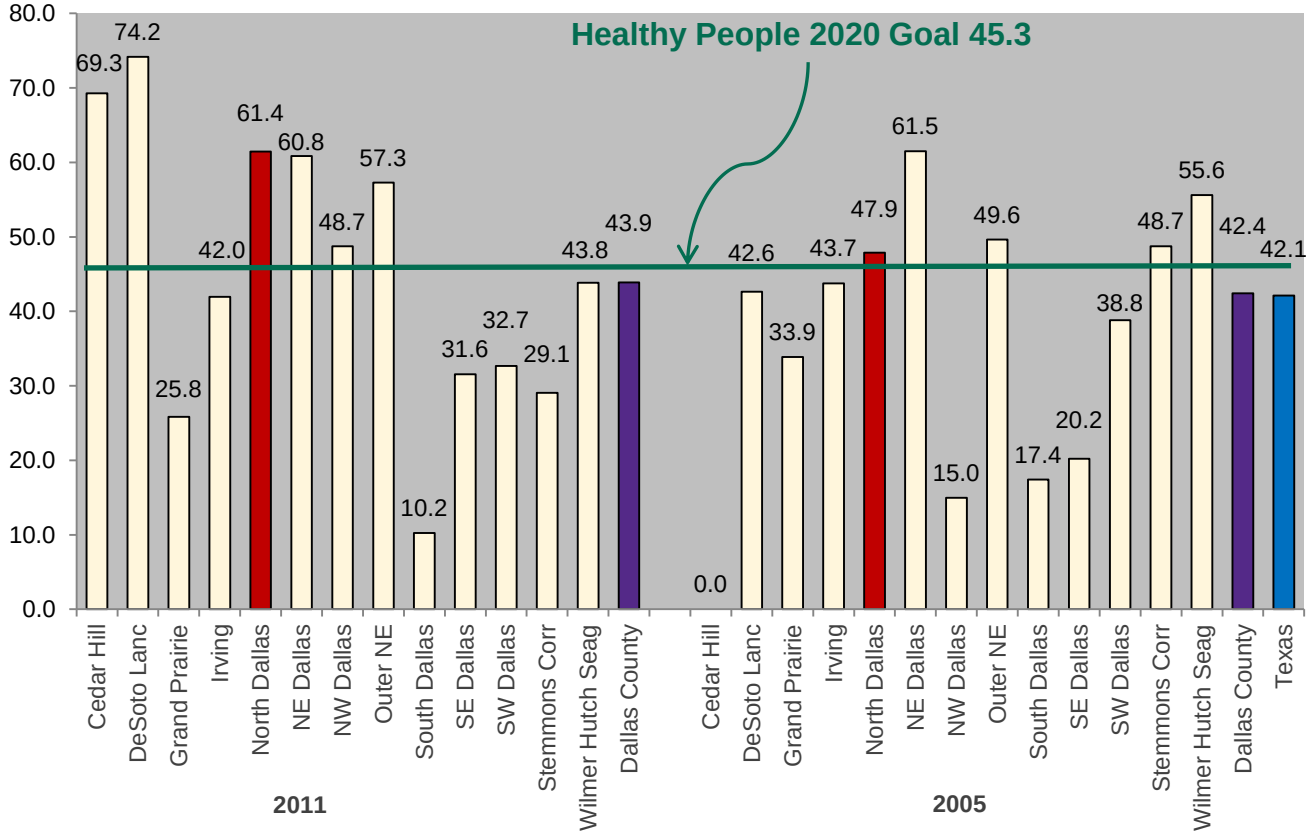




Source: Texas Department of State Health Services, Bureau of Vital Statistics; denominator population data from US Census American Community Survey.

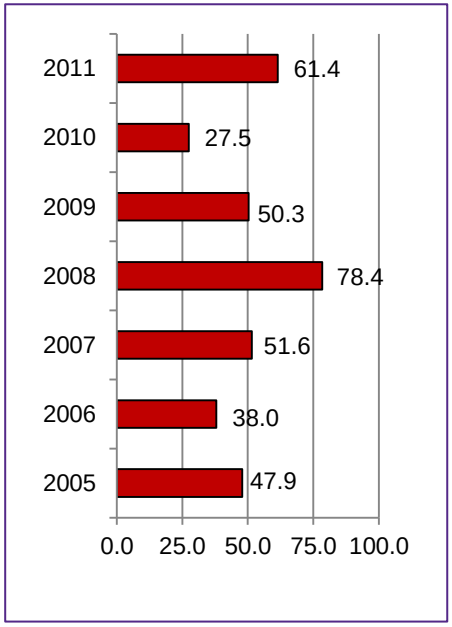
# Risk Factors: Falls Death Rates Among Seniors

*North Dallas Service Area*

**Falls Deaths Age 65+**



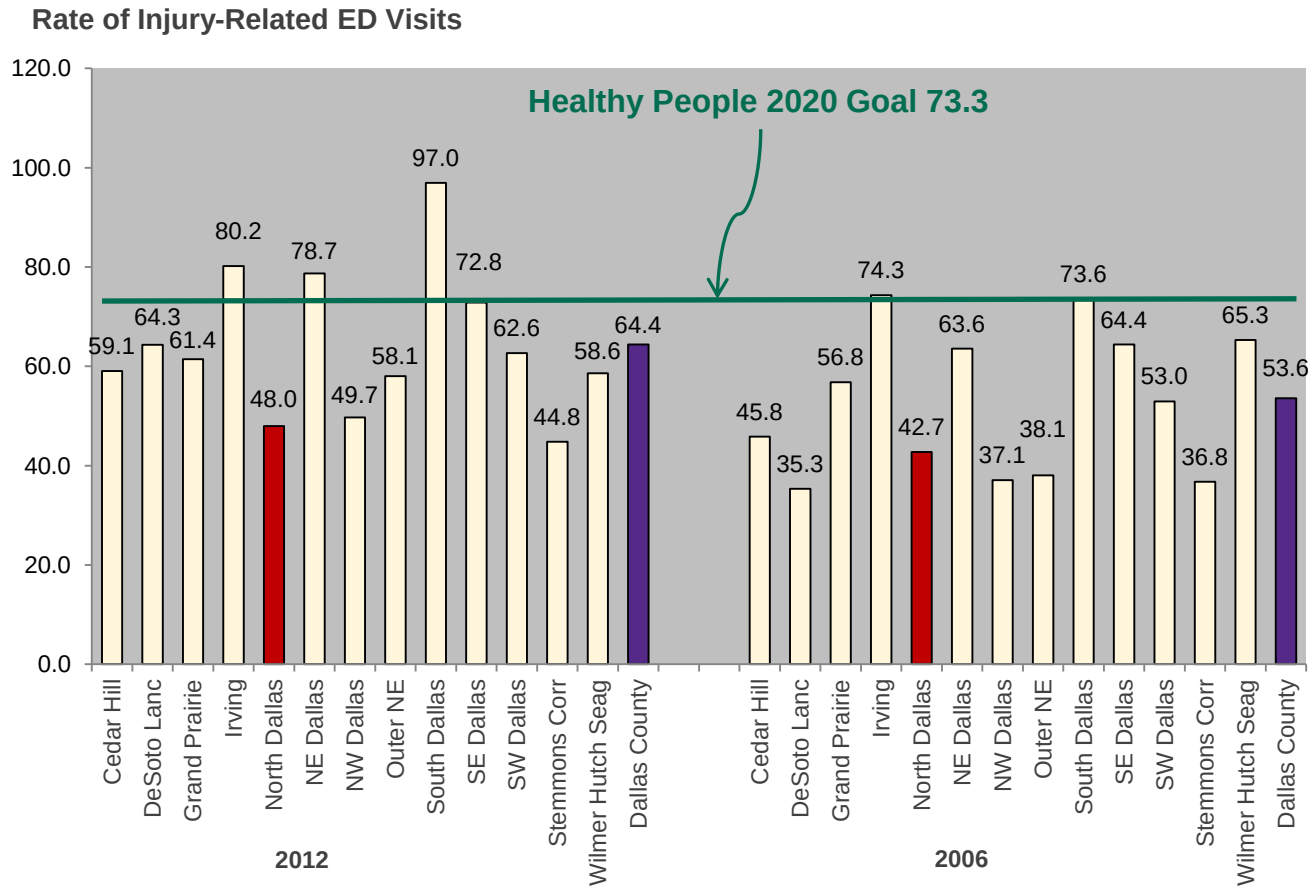

**Falls fatality rates, ages 65+, per 100,000, North Dallas Service Area**

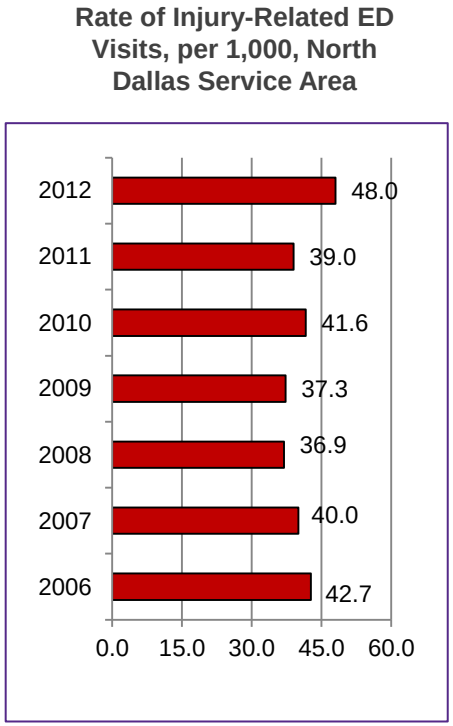



**Source: Texas Department of State Health Services, Bureau of Vital Statistics, unpublished data; denominator population data from US Census Bureau American Community Survey. 2005 Dallas County data from Centers for Disease Control and Prevention, National Center for Health Statistics. Multiple Cause of Death File 2005-2006. CDC WONDER On-line Database, compiled from Multiple Cause of Death File 2005-2006Series 20 No. 2L, 2012. 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: Rate of Injury-Related ED Visits

*North Dallas Service Area*

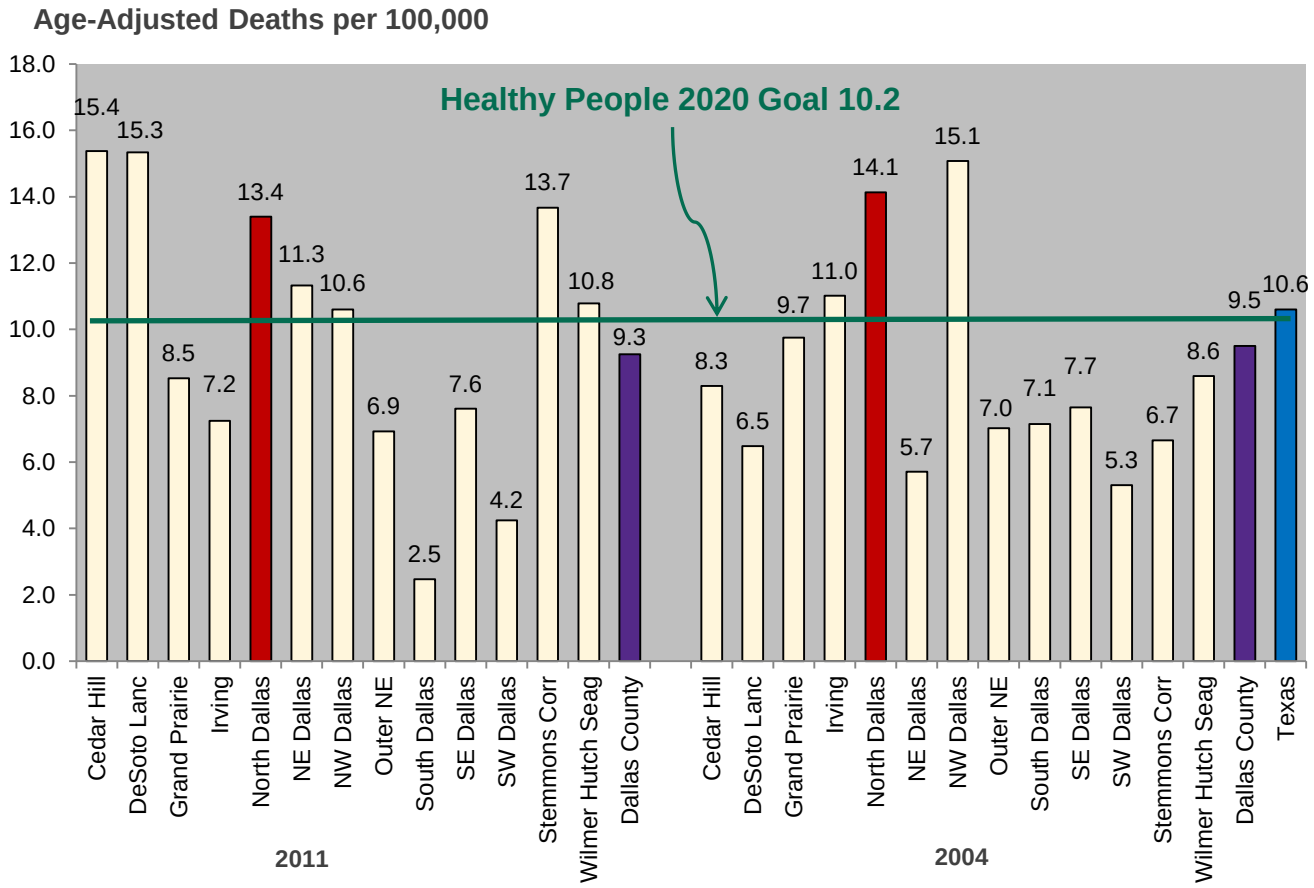


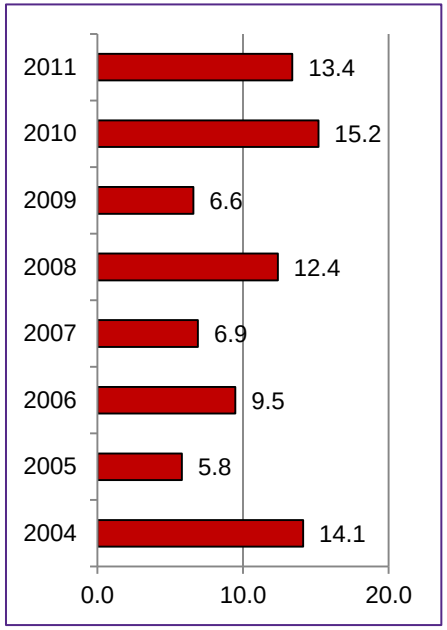




Source: DFWHC ERF Information Quality Services Center Regional Data, 2010. Dallas-Fort Worth Hospital Council Education and Research Foundation, Information and Quality Services Center, Irving, Texas. July 2013. Denominator population data from Claritas, Inc.

# Risk Factors: Suicide Mortality Rates

*North Dallas Service Area*

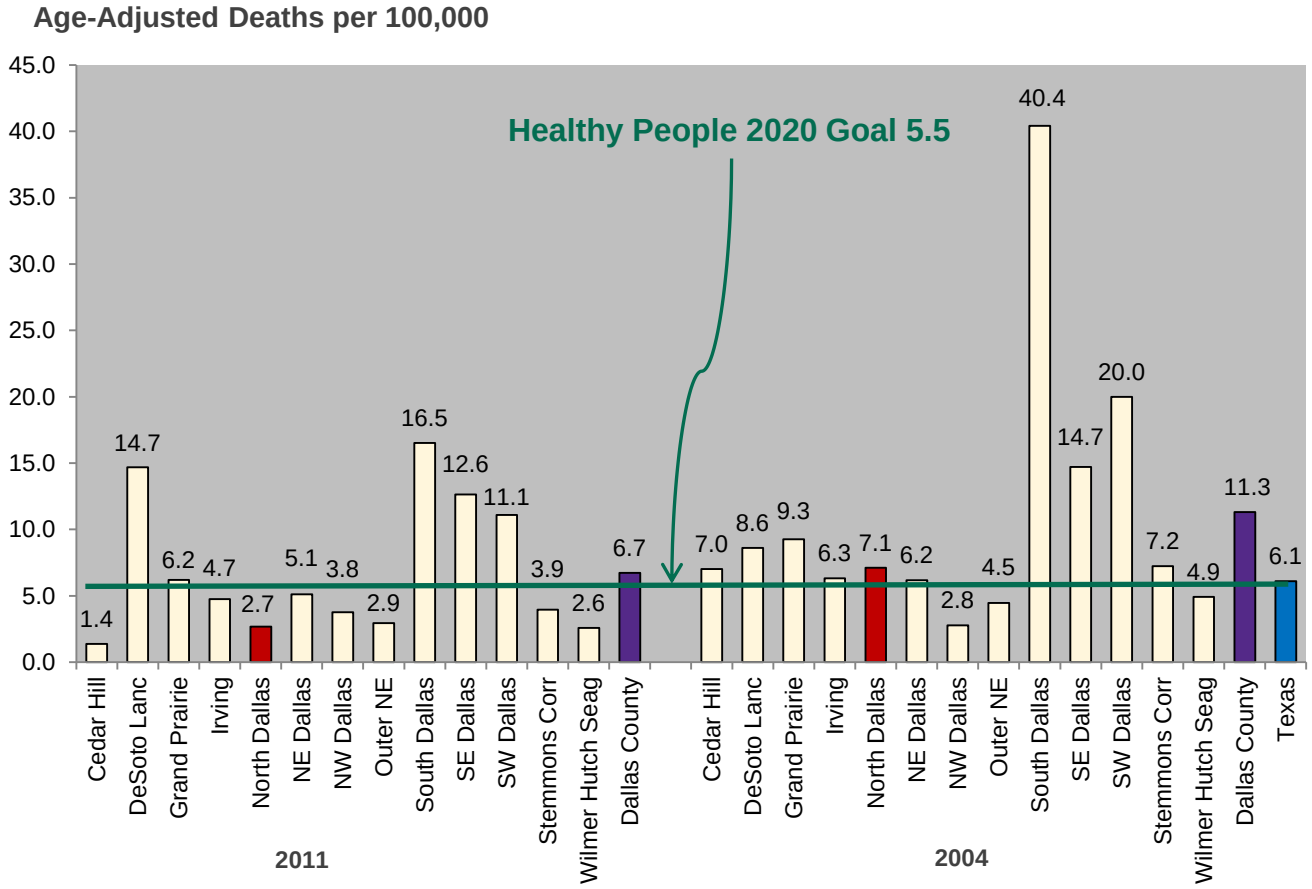


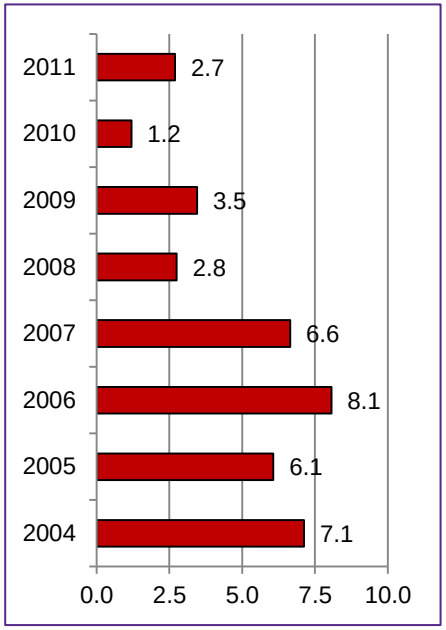




Source: Texas Department of State Health Services, Bureau of Vital Statistics; denominator population data from US Census American Community Survey.

# Risk Factors: Homicide Mortality Rates

*North Dallas Service Area*

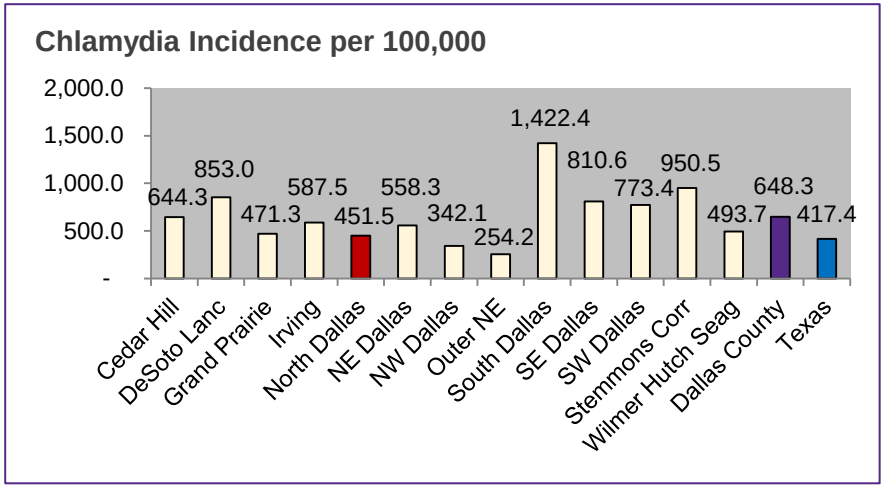


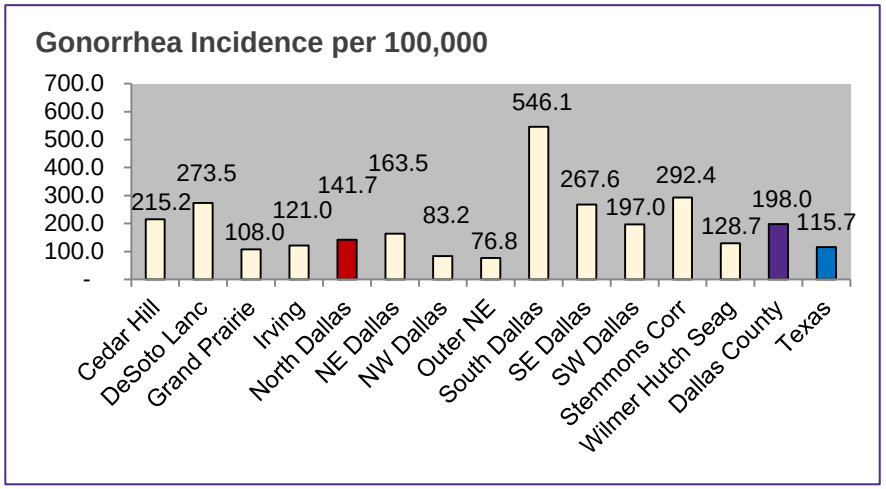



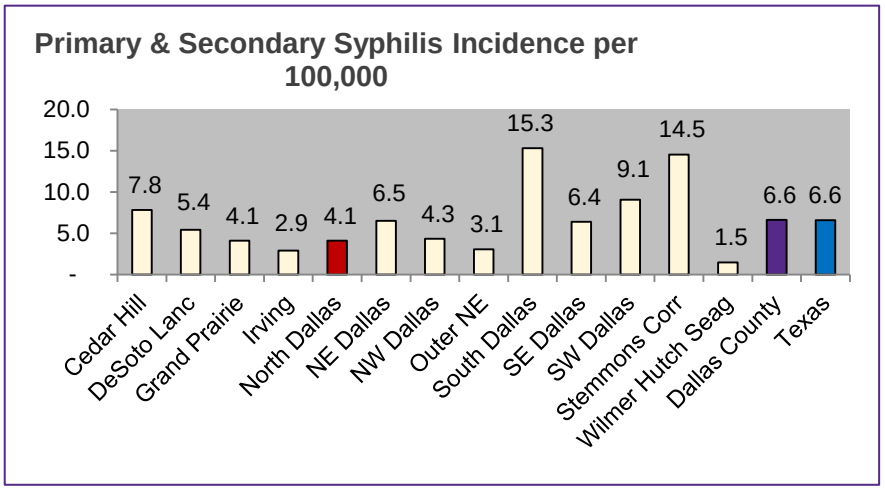

Source: Texas Department of State Health Services, Bureau of Vital Statistics; denominator population data from US Census American Community Survey.

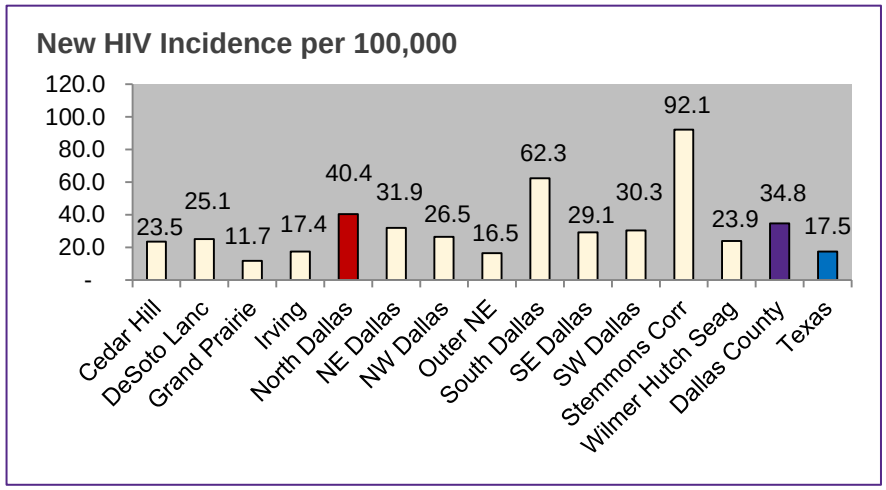
# Risk Factors: High Risk Sexual Behavior, Sexually Transmitted Disease Incidence Rates, 2011

*North Dallas Service Area*



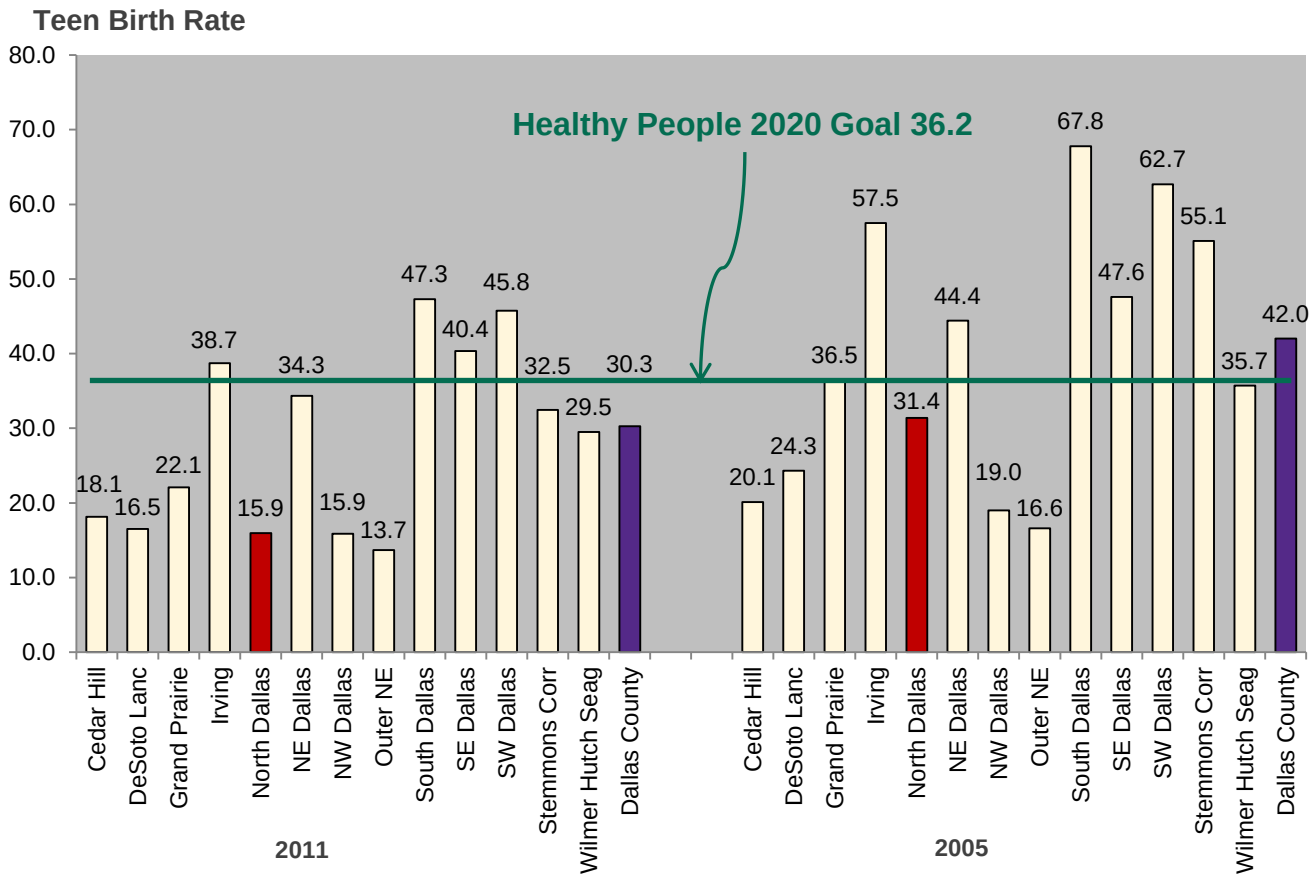



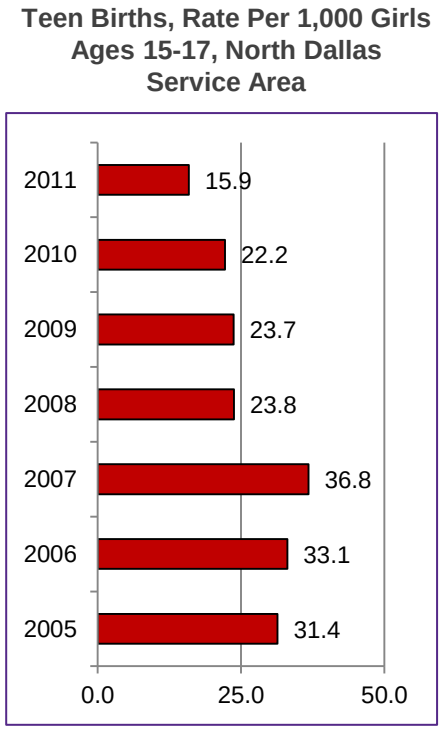



Source: Texas Department of State Health Services, Bureau of STD/HIV, unpublished data; Denominator population data from Claritas, Inc.; Dallas County and Texas Rates are from http://www.dshs.state.tx.us/hivstd/reports/STD2011.pdf and http://www.dshs.state.tx.us/hivstd/reports/HIV2011.pdf

# Risk Factors: High Risk Sexual Behavior, Teen Birth Rates

*North Dallas Service Area*



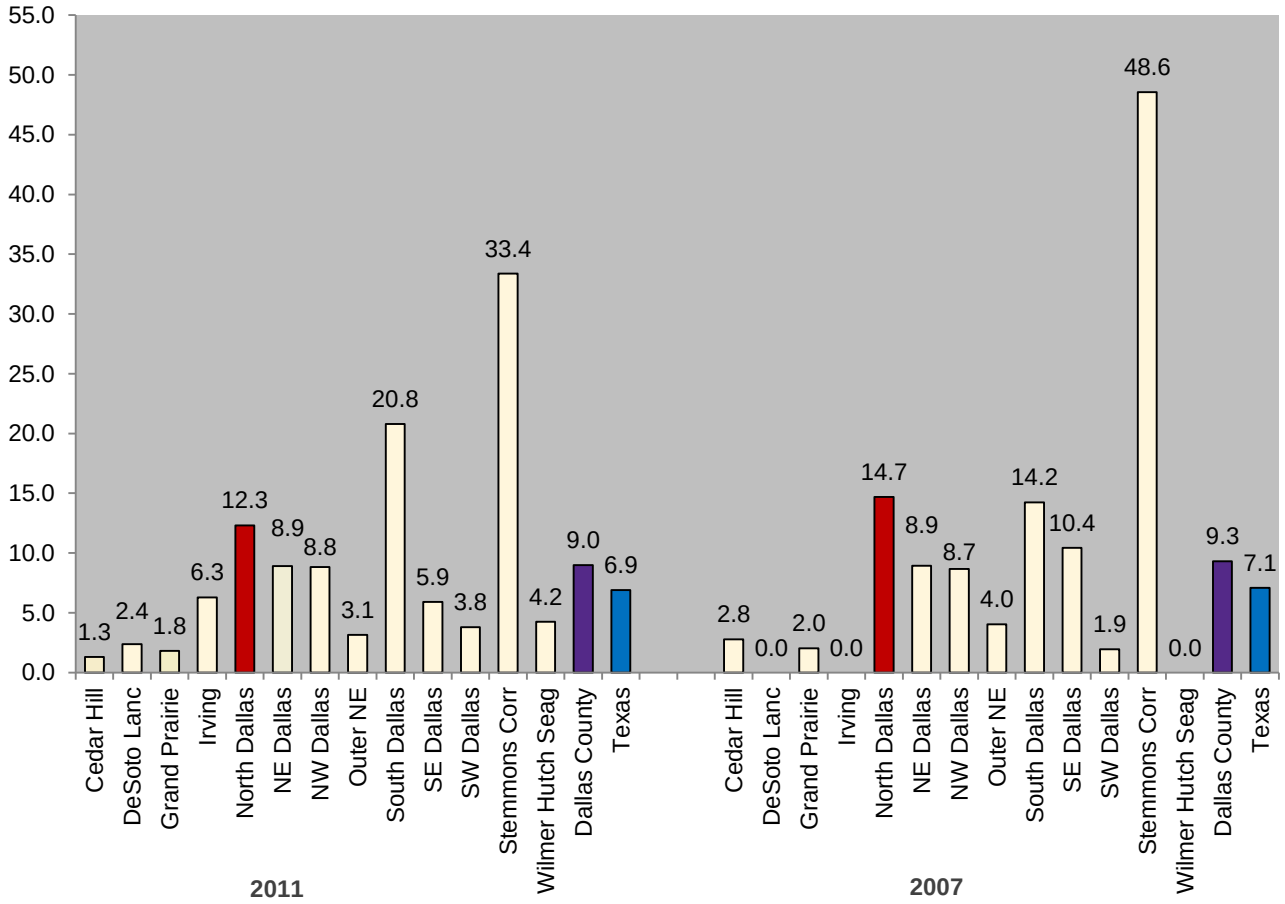




Source: Texas Department of State Health Services, Bureau of Vital Statistics; denominator population data Nielson/Claritas mid 2011 Pop Facts

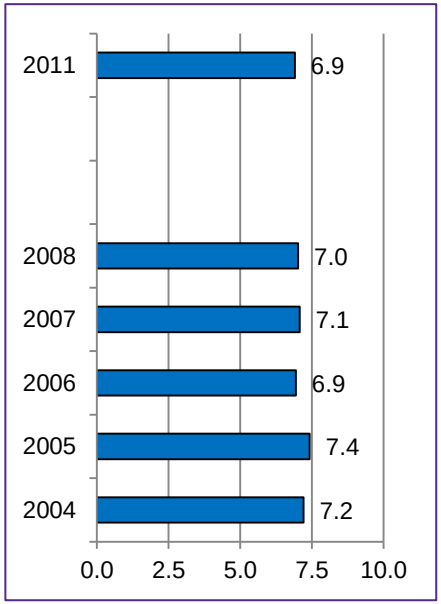
# Risk Factors: Liquor Store Density, 2011

*North Dallas Service Area*

**Liquor Stores Per 100,000, 2011**



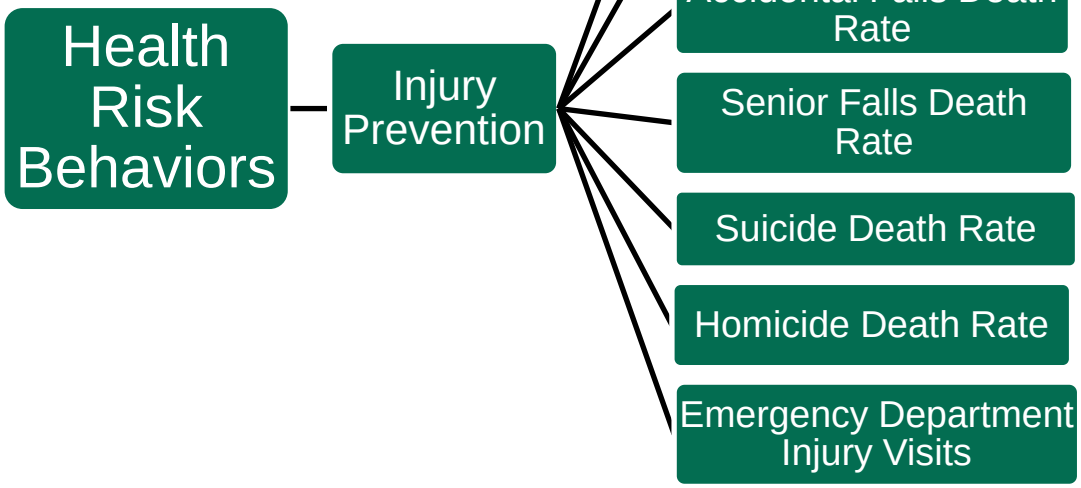

**Liquor Store Density, Stores per 100,000, State of Texas**




Source: US Census Bureau, 2011 County Business Patterns; denominator population data from US Census Bureau; 2007 from 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

# Health Risk Behaviors

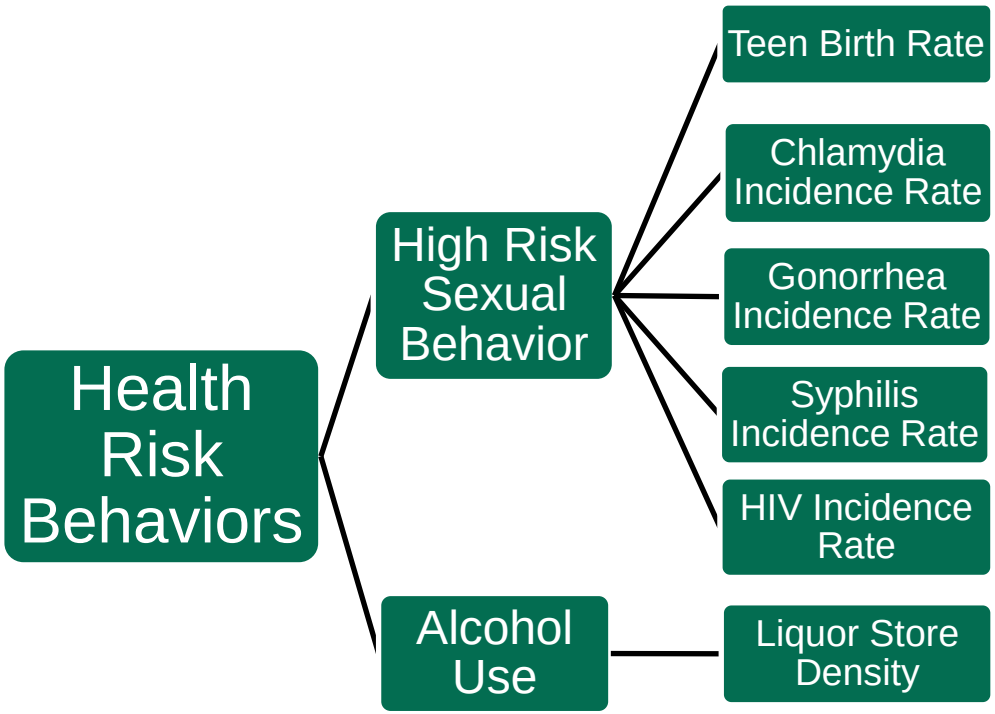
– Doing better than the benchmark
– Same as/not significantly different from the benchmark
– Worse than the benchmark




| North Dallas Compared to Healthy People 2020 Goal | North Dallas Compared to Other Service Areas (Quartiles) | North Dallas Compared to Past Years' Data (CI) |
|---|---|---|
| 🟢 | 🟢 | 🟡 |
| 🔴 | 🟡 | 🔴 |
| 🔴 | 🟡 | 🟡 |
| 🔴 | 🔴 | 🔴 |
| 🔴 | 🟡 | 🟡 |
| 🟢 | 🟢 | 🟡 |
| 🟢 | 🟢 | 🔴 |

# Health Risk Behaviors

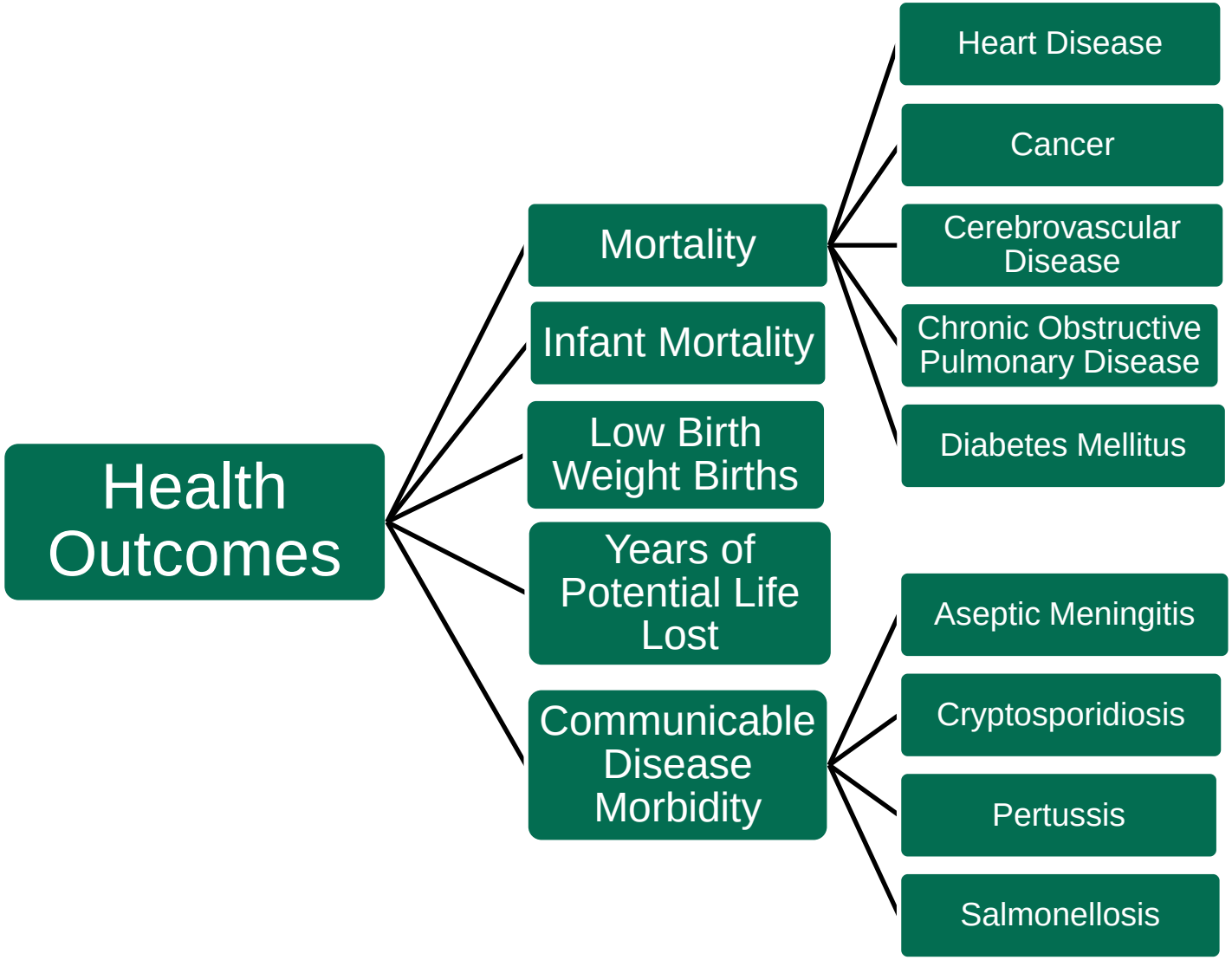
– Doing better than the benchmark
– Same as/not significantly different from the benchmark
– Worse than the benchmark




| | North Dallas Compared to Healthy People 2020 Goal | North Dallas Compared to Other Service Areas (Quartiles) | North Dallas Compared to Past Years' Data (CI) |
|---|---|---|---|
| Teen Birth Rate | ● | ● | ● |
| Chlamydia Incidence Rate | N/A | ● | ● |
| Gonorrhea Incidence Rate | N/A | ● | ● |
| Syphilis Incidence Rate | N/A | ● | ● |
| HIV Incidence Rate | N/A | ● | ● |
| Liquor Store Density | N/A | ● | N/A |

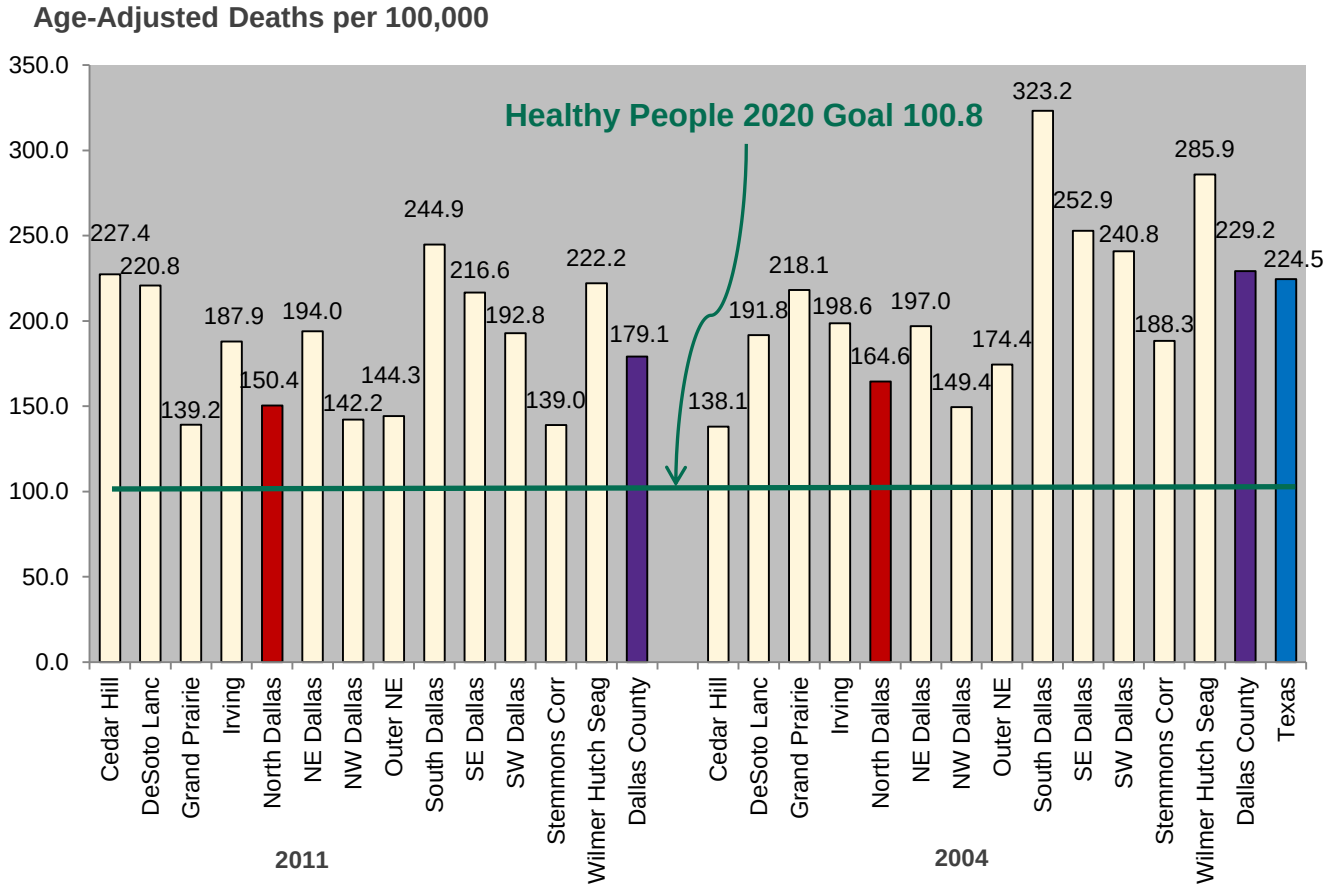
Parkland

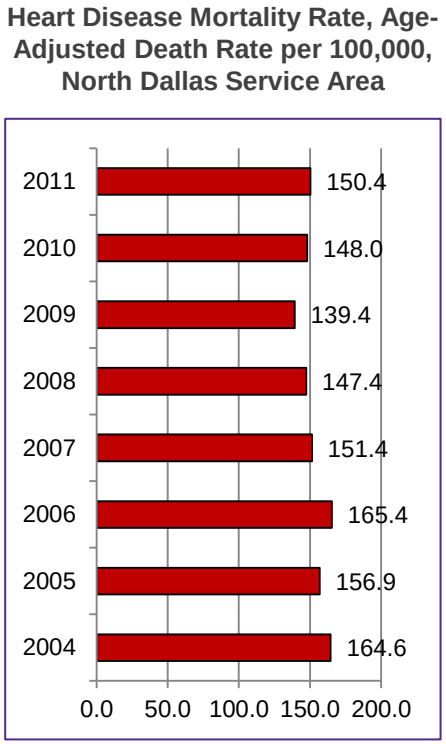
# Health Outcomes



# Health Outcomes: Heart Disease Mortality Rates

*North Dallas Service Area*

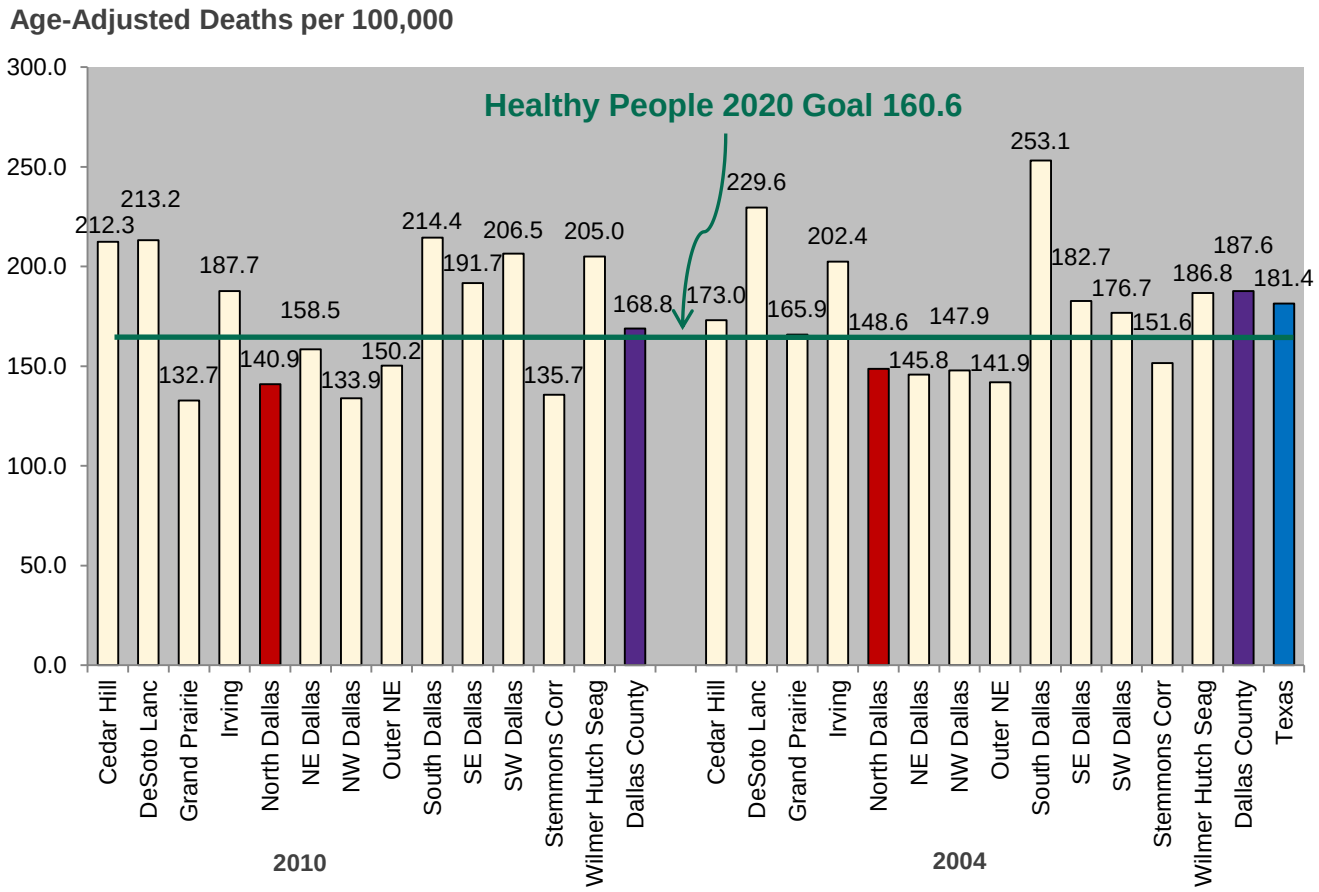


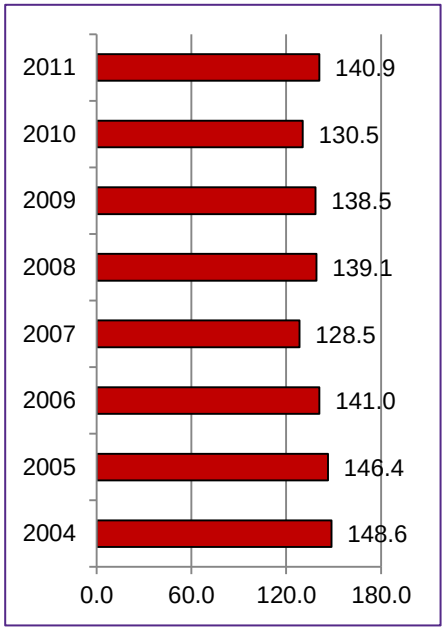




Source: Texas Department of State Health Services, Bureau of Vital Statistics; denominator population data from US Census American Community Survey

# Health Outcomes: Cancer Mortality Rates

*North Dallas Service Area*



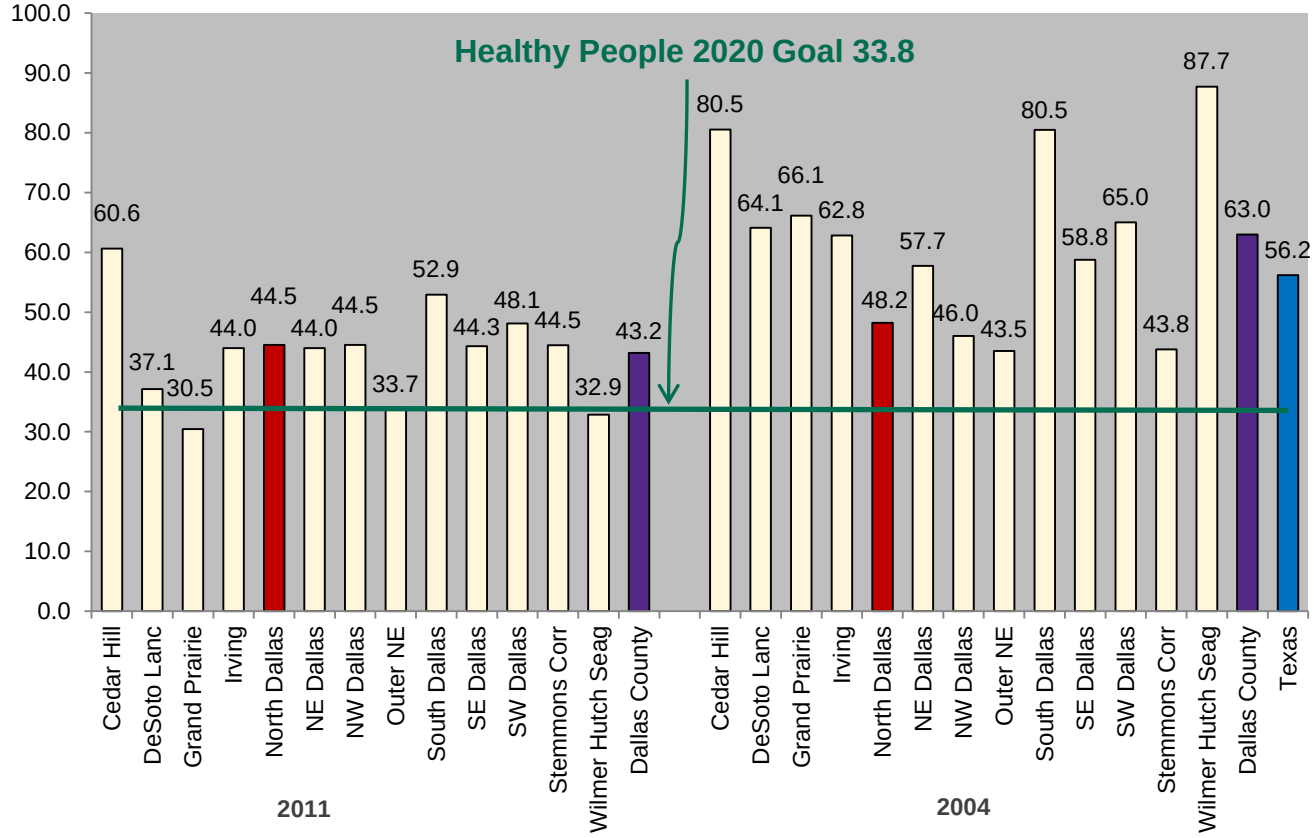




Source: Texas Department of State Health Services, Bureau of Vital Statistics; denominator population data from US Census American Community Survey

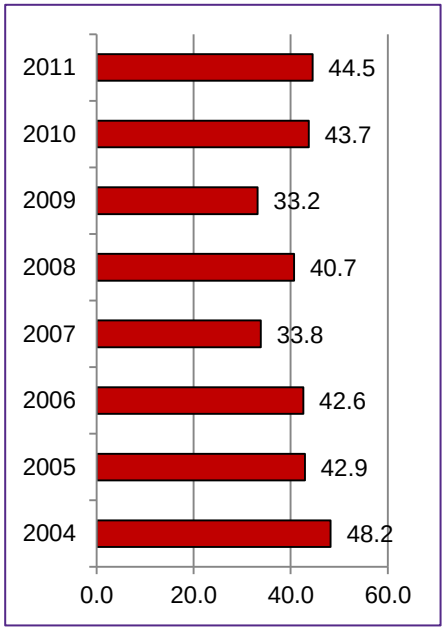
# Health Outcomes: Cerebrovascular Disease Mortality Rates

*North Dallas Service Area*

**Age-Adjusted Deaths per 100,000**



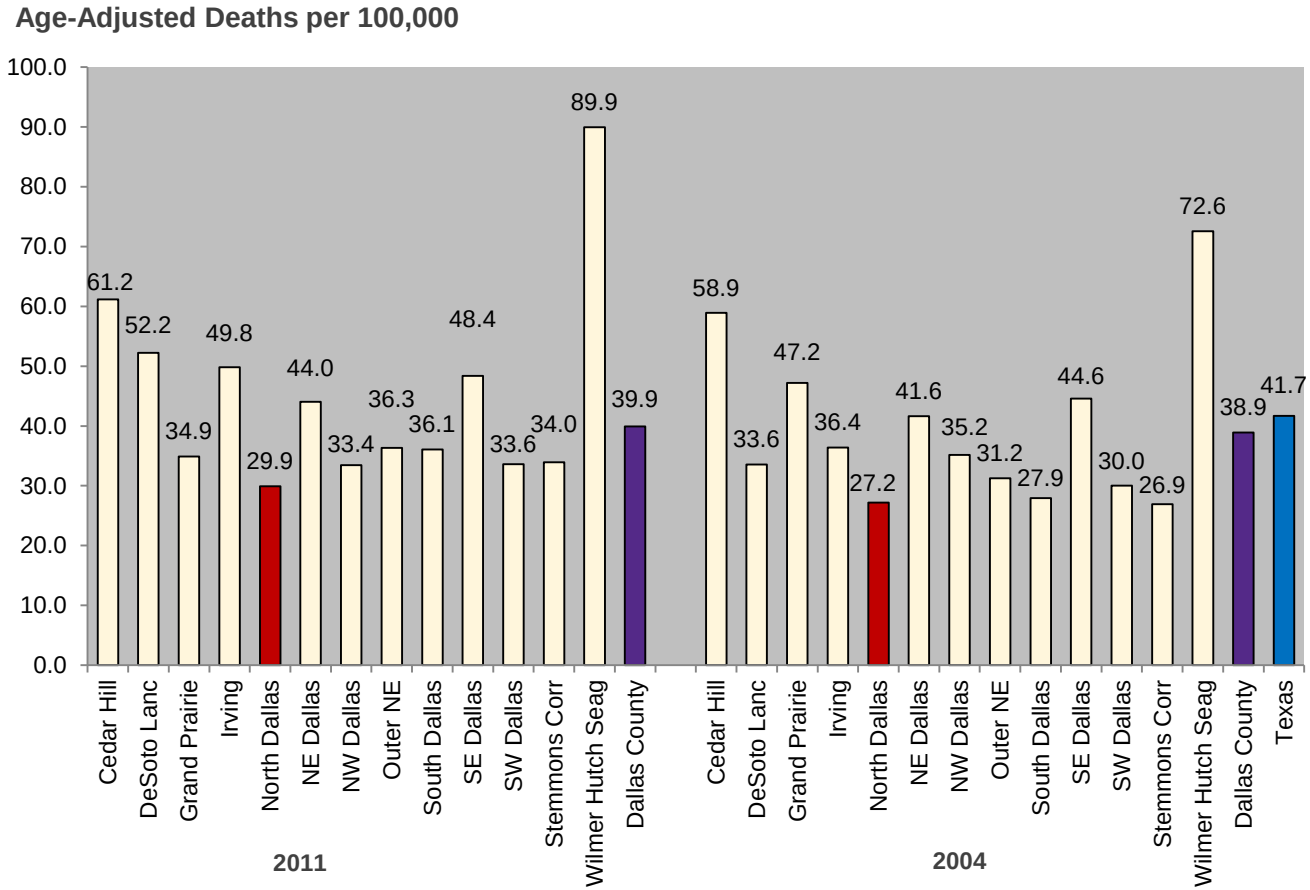

**Cerebrovascular Disease Mortality Rate, Age-Adjusted Death Rate per 100,000, North Dallas Service Area**



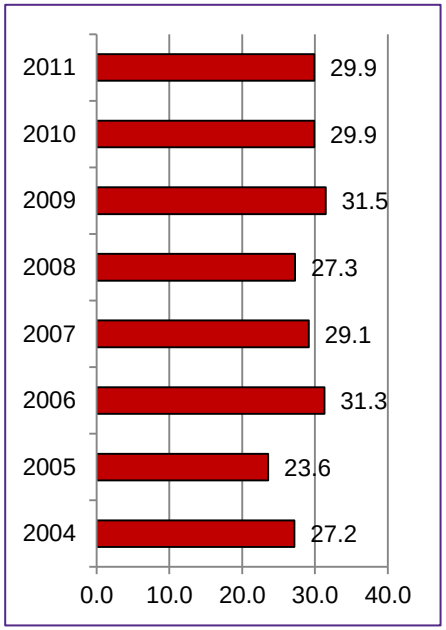

**Source: Texas Department of State Health Services, Bureau of Vital Statistics; denominator population data from US Census American Community Survey**

# Health Outcomes: Chronic Obstructive Pulmonary Disease Mortality Rates

*North Dallas Service Area*




**Chronic Obstructive Pulmonary Disease Mortality Rate, Age-Adjusted Death Rate per 100,000, North Dallas Service Area**



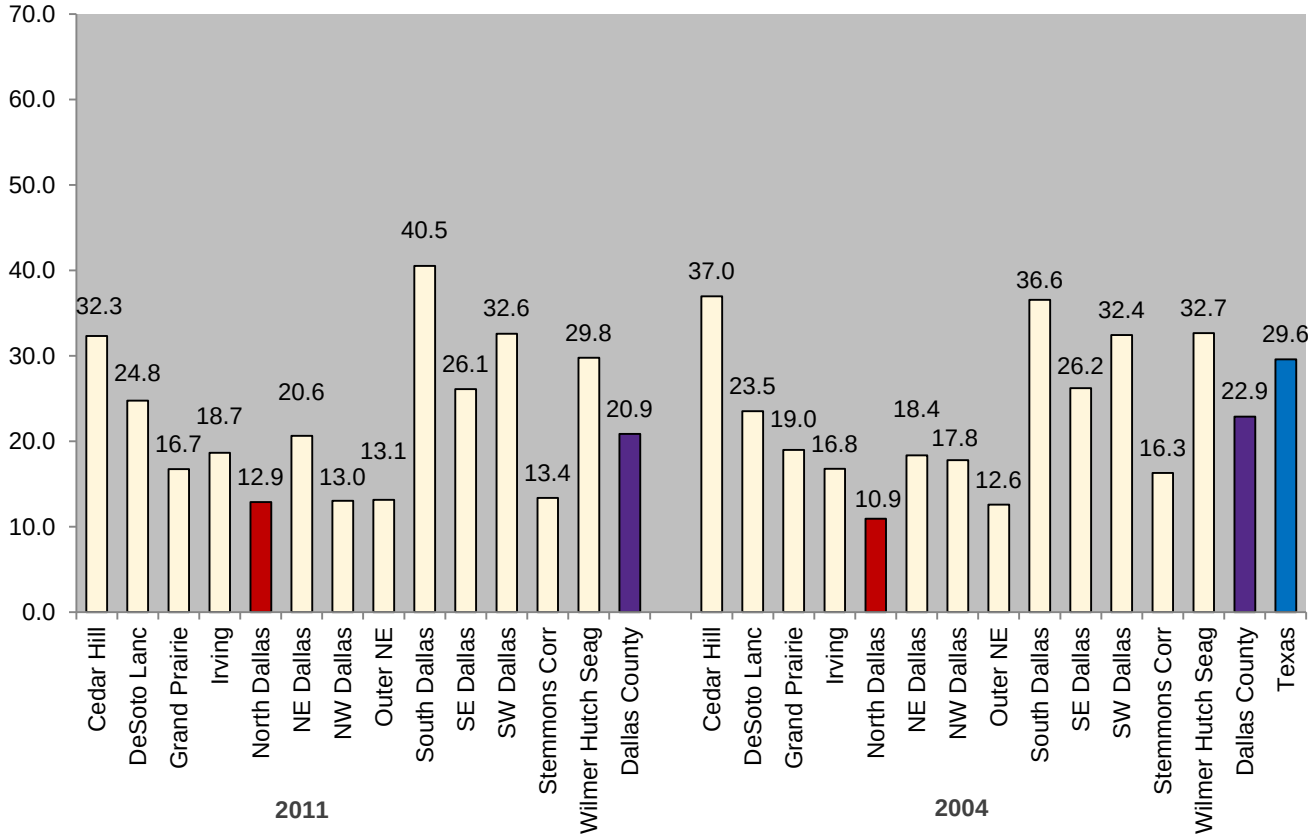

**NOTE: No Healthy People 2020 goal matches this metric.**

**Source: Texas Department of State Health Services, Bureau of Vital Statistics; denominator population data from US Census American Community Survey**

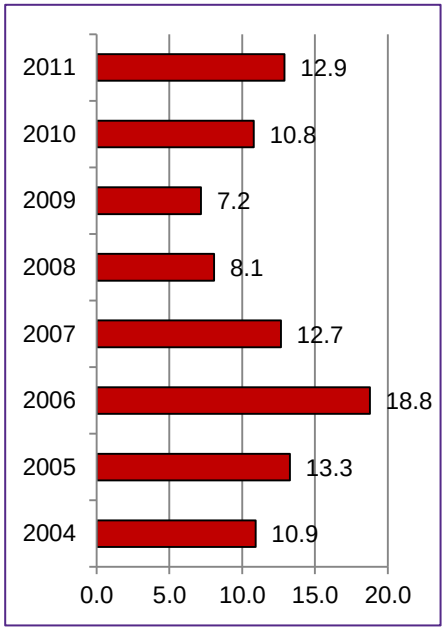
# Health Outcomes: Diabetes Mortality Rates

*North Dallas Service Area*

**Age-Adjusted Deaths per 100,000**




**Diabetes Mellitus Mortality Rate, Age-Adjusted Death Rate per 100,000, North Dallas Service Area**

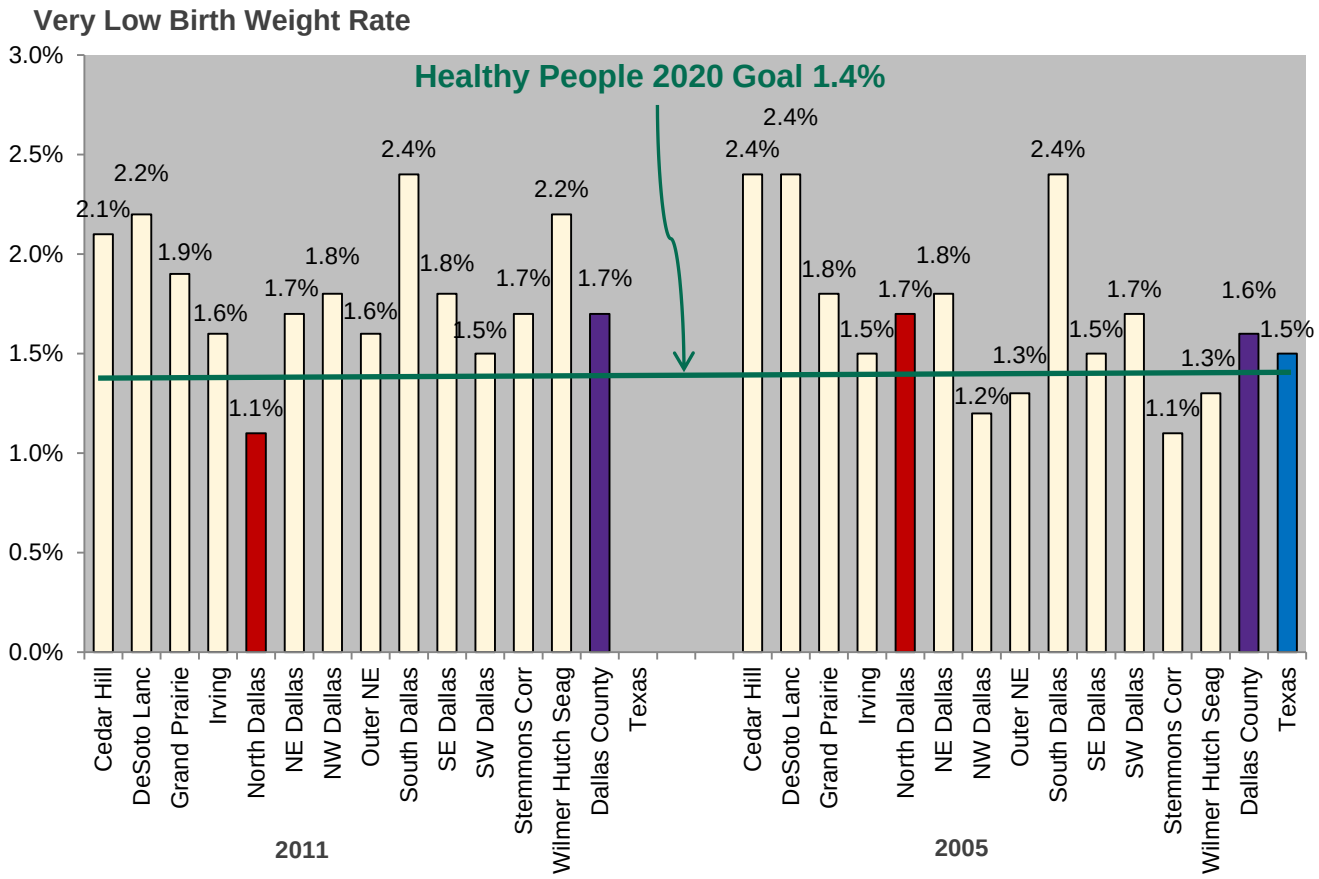


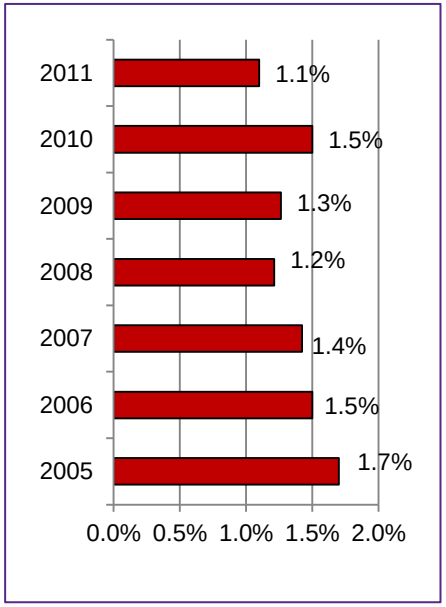

**NOTE: No Healthy People 2020 goal matches this metric.**

**Source: Texas Department of State Health Services, Bureau of Vital Statistics; denominator population data from US Census American Community Survey**

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

*North Dallas Service Area*

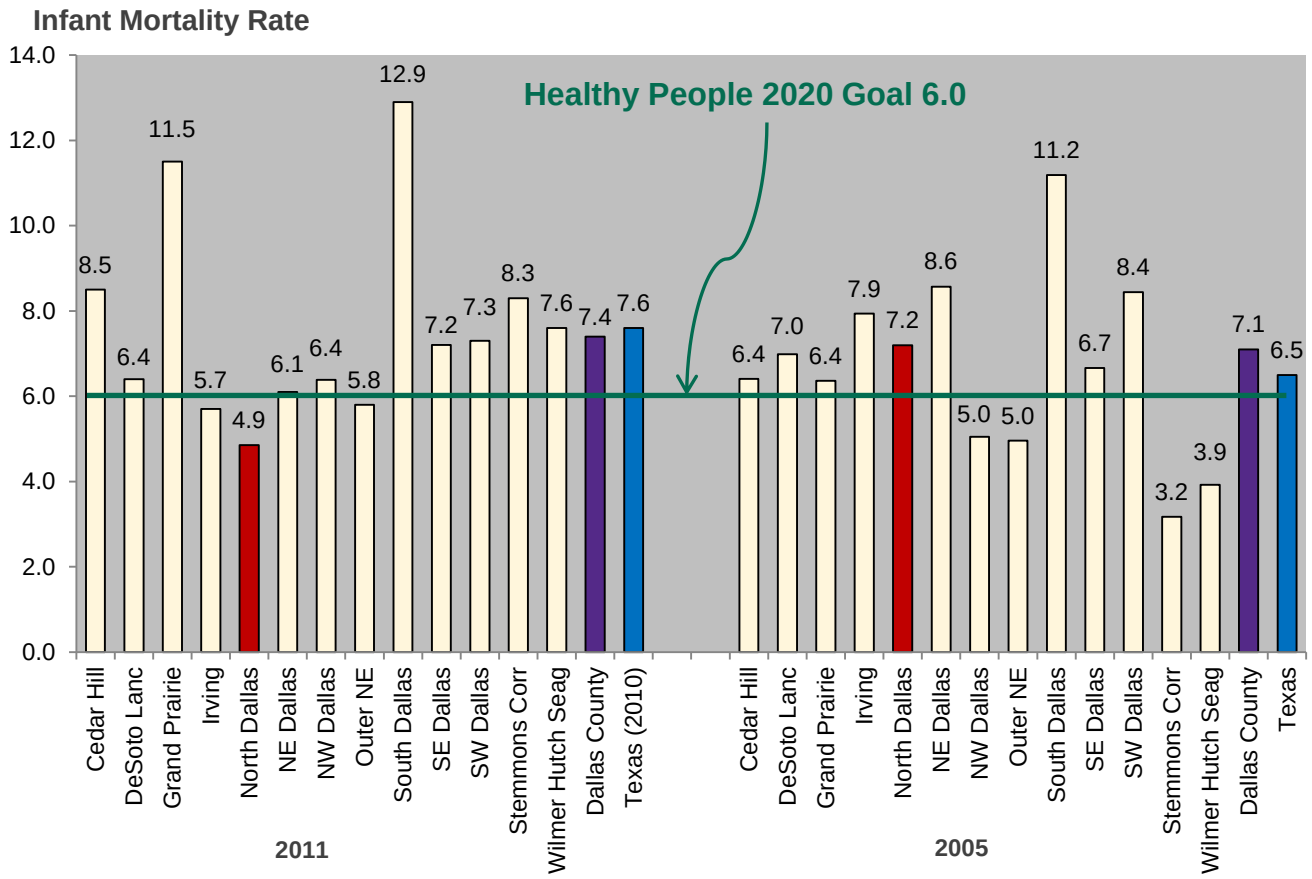


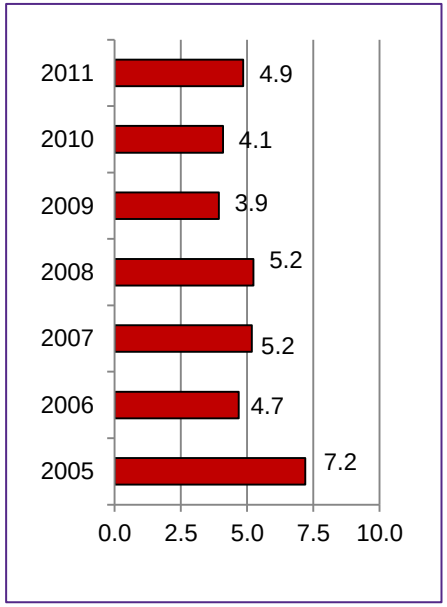




Source: Texas Department of State Health Services, Bureau of Vital Statistics

# Health Outcomes: Birth Outcomes, Infant Mortality Rate

*North Dallas Service Area*



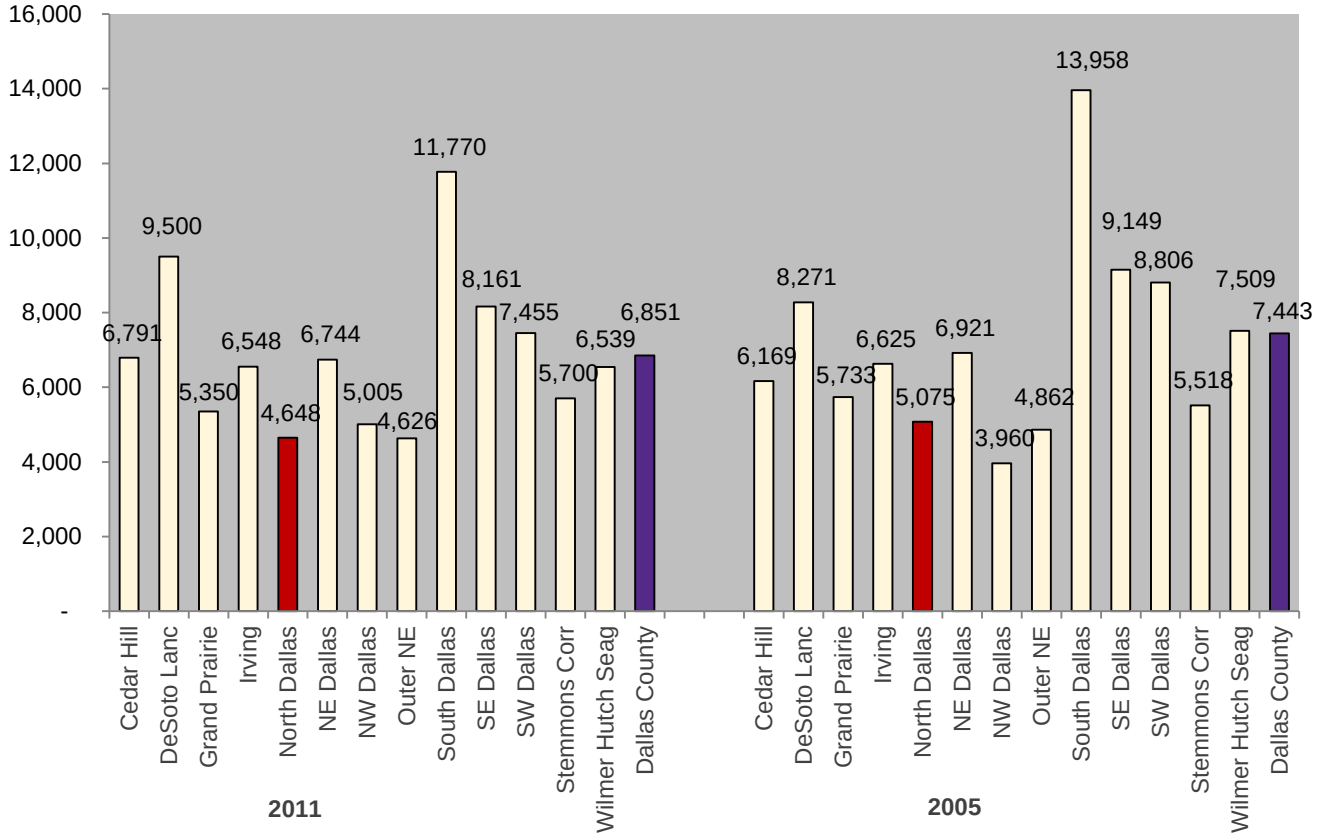




Source: Texas Department of State Health Services, Bureau of Vital Statistics

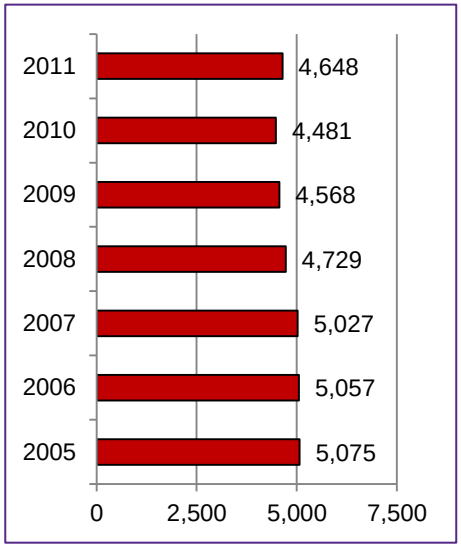
# Health Outcomes: Years of Potential Life Lost, All Causes

*North Dallas Service Area*

**Years of Potential Life Lost Rate per 100,000***




**Years of Potential Life Lost Rate*, per 100,000, North Dallas Service Area**

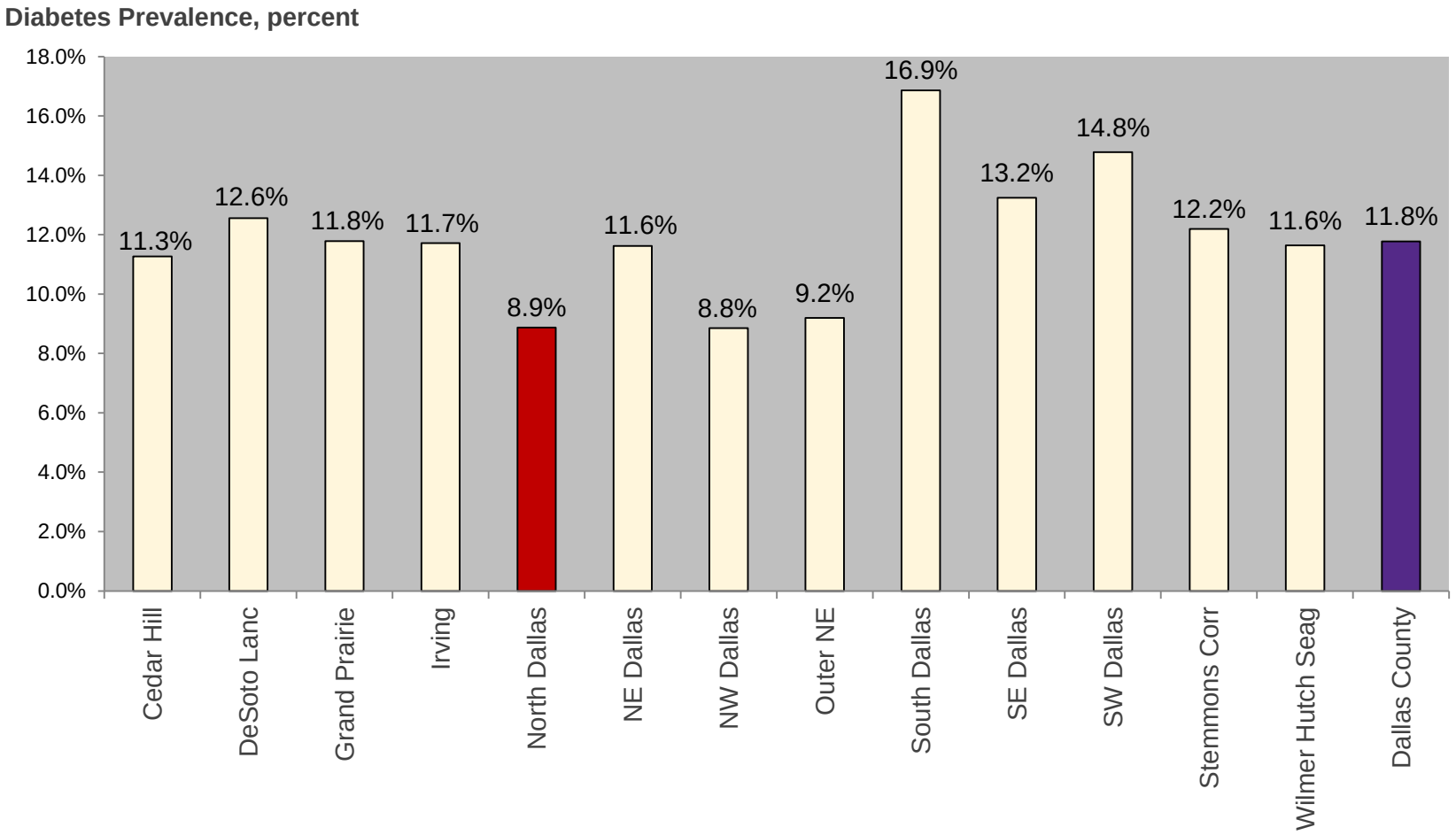



***Years of Potential Life Lost Rate is defined as the rate of deaths under age 75 per 100,000 population under age 75.**

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

# Health Outcomes: Estimated Diabetes Prevalence Rates (Diagnosed and Undiagnosed)

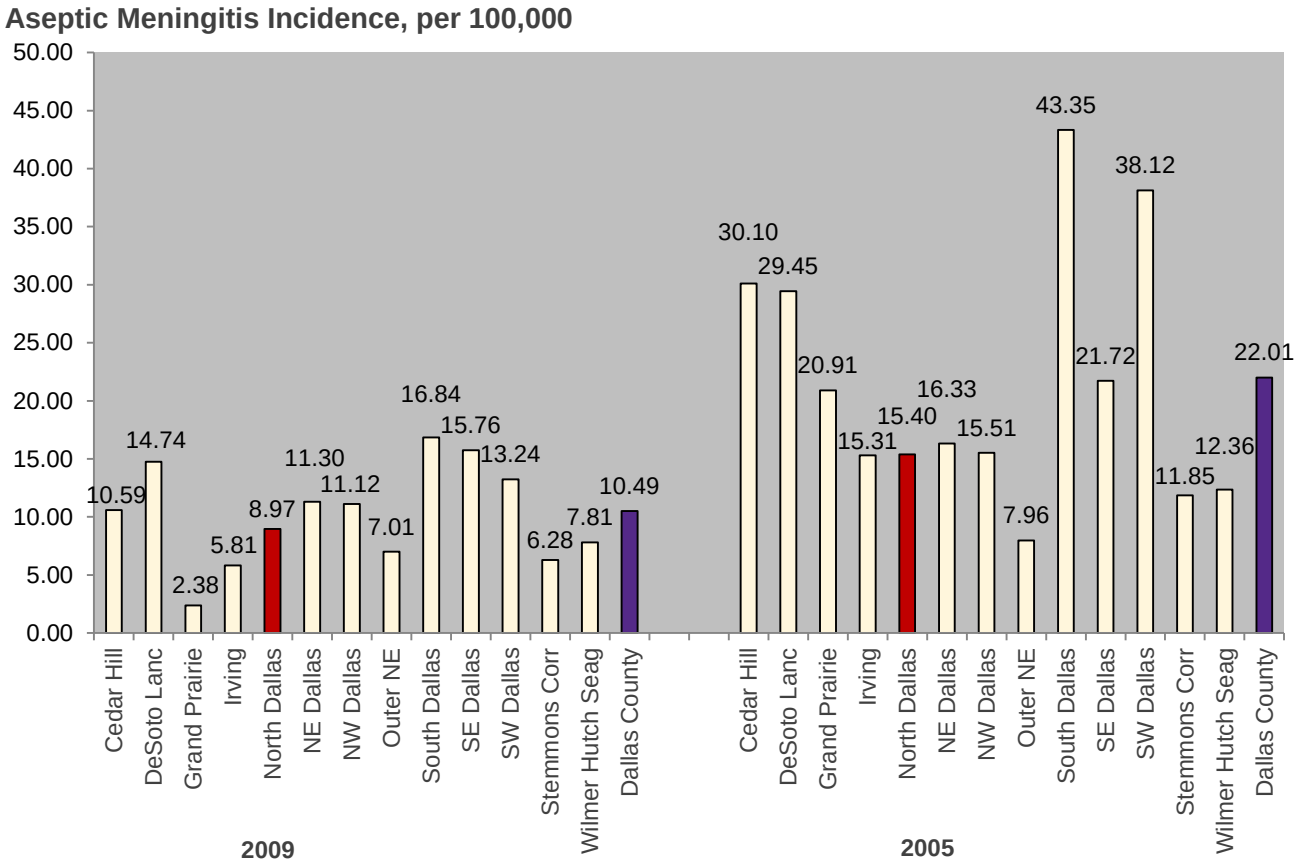
*North Dallas Service Area*

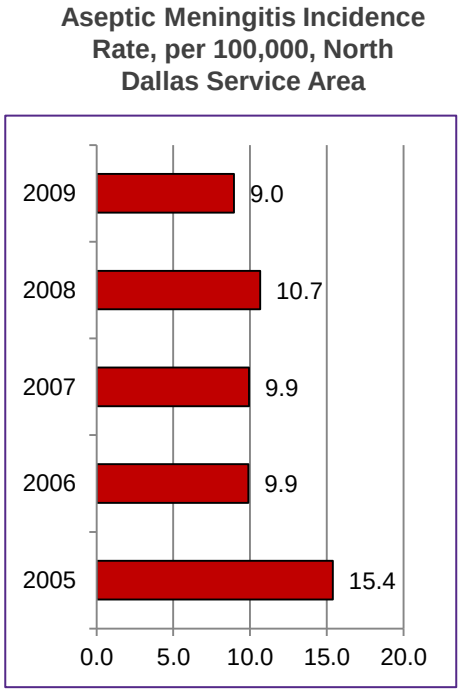



**Source: US Diabetes Index, National Minority Quality Forum and Centers for Disease Control and Prevention, 2012; based on NHANES population prevalence estimates, 2010. Denominator population data 2010 from Nielson/Claritas, Inc. Pop Facts. Mid 2010 version**

# Health Outcomes: Reportable Communicable Disease Rates

*North Dallas Service Area*

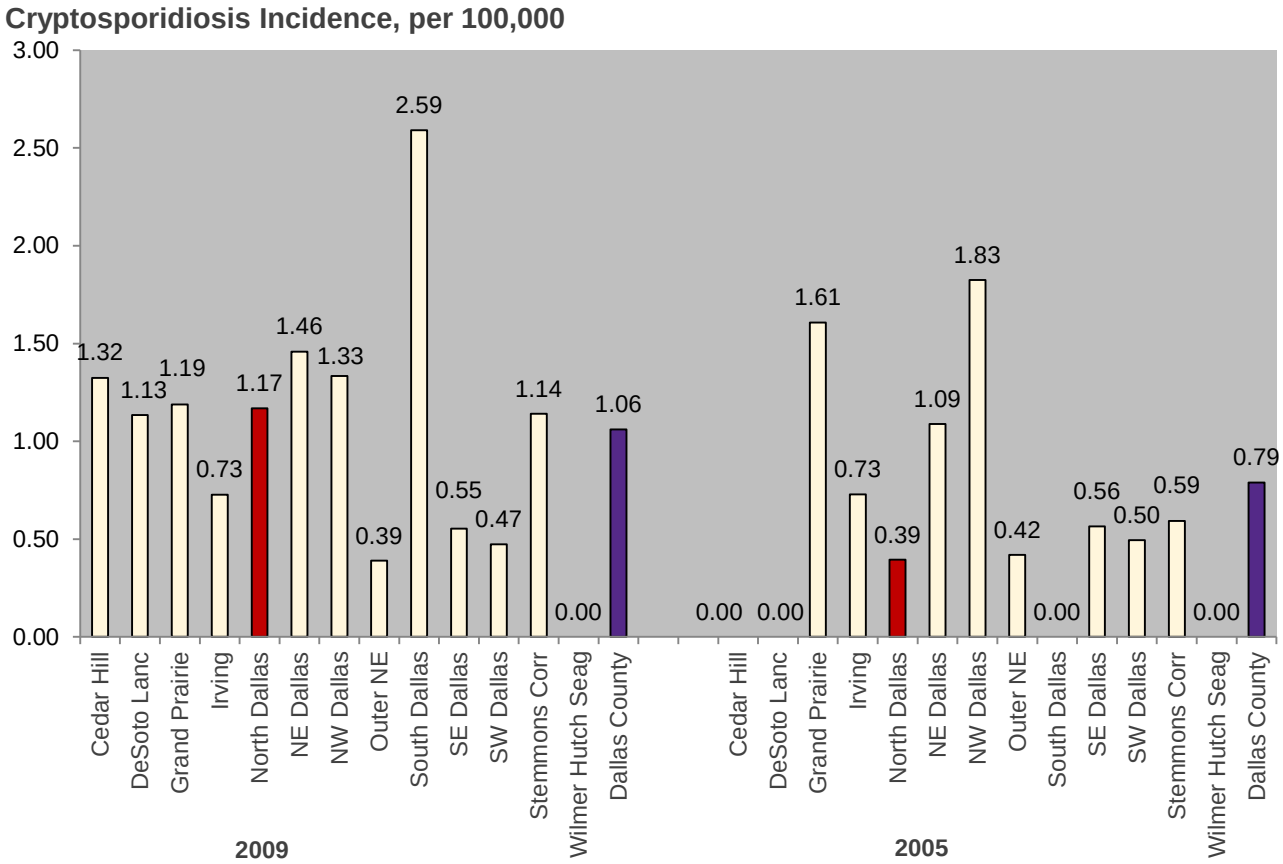


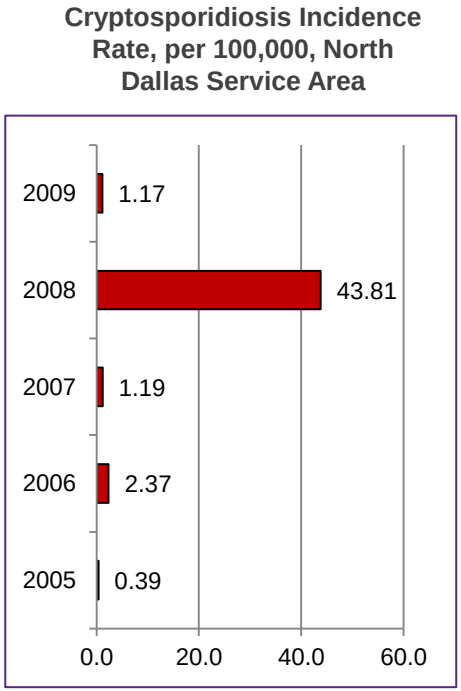




Source: Texas Department of State Health Services, Infectious Disease Control Unit, unpublished data; denominator population data from Claritas, Inc.; 2005 Dallas County data from Dallas County Health and Human Services web site: http://www.dallascounty.org/department/hhservices/services/communicable/documents/ReportableConditions2003-07Annual.pdf;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

# Health Outcomes: Reportable Communicable Disease Rates

*North Dallas Service Area*

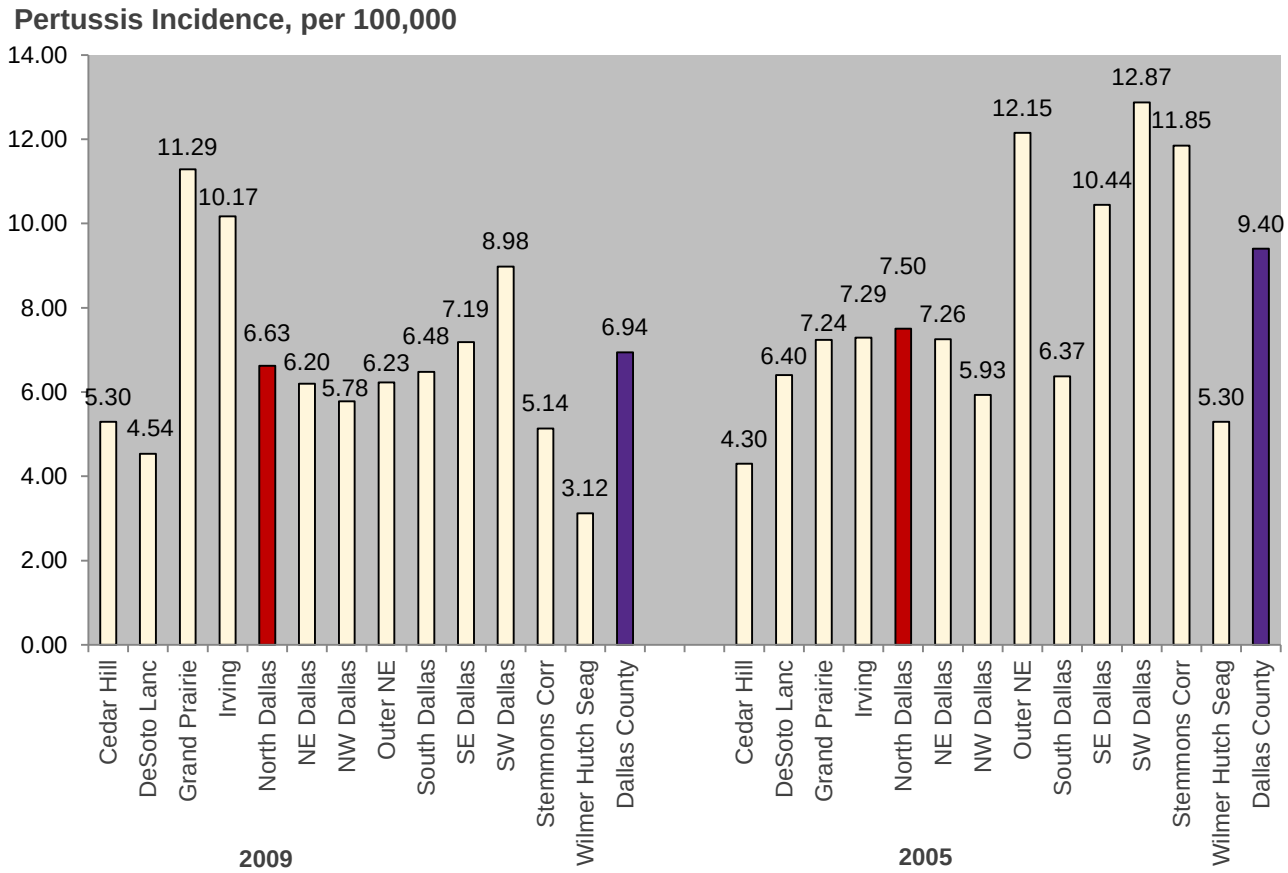


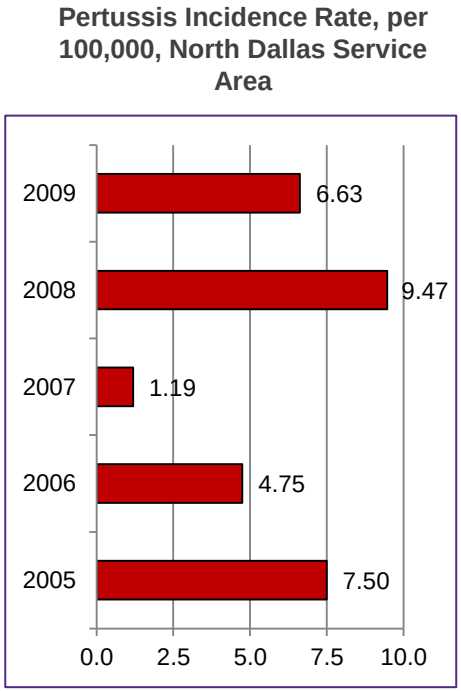




Source: Texas Department of State Health Services, Infectious Disease Control Unit, unpublished data; denominator population data from Claritas, Inc.; 2005 Dallas County data from Dallas County Health and Human Services web site: http://www.dallascounty.org/department/hhservices/services/communicable/documents/ReportableConditions2003-07Annual.pdf;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

# Health Outcomes: Reportable Communicable Disease Rates

*North Dallas Service Area*



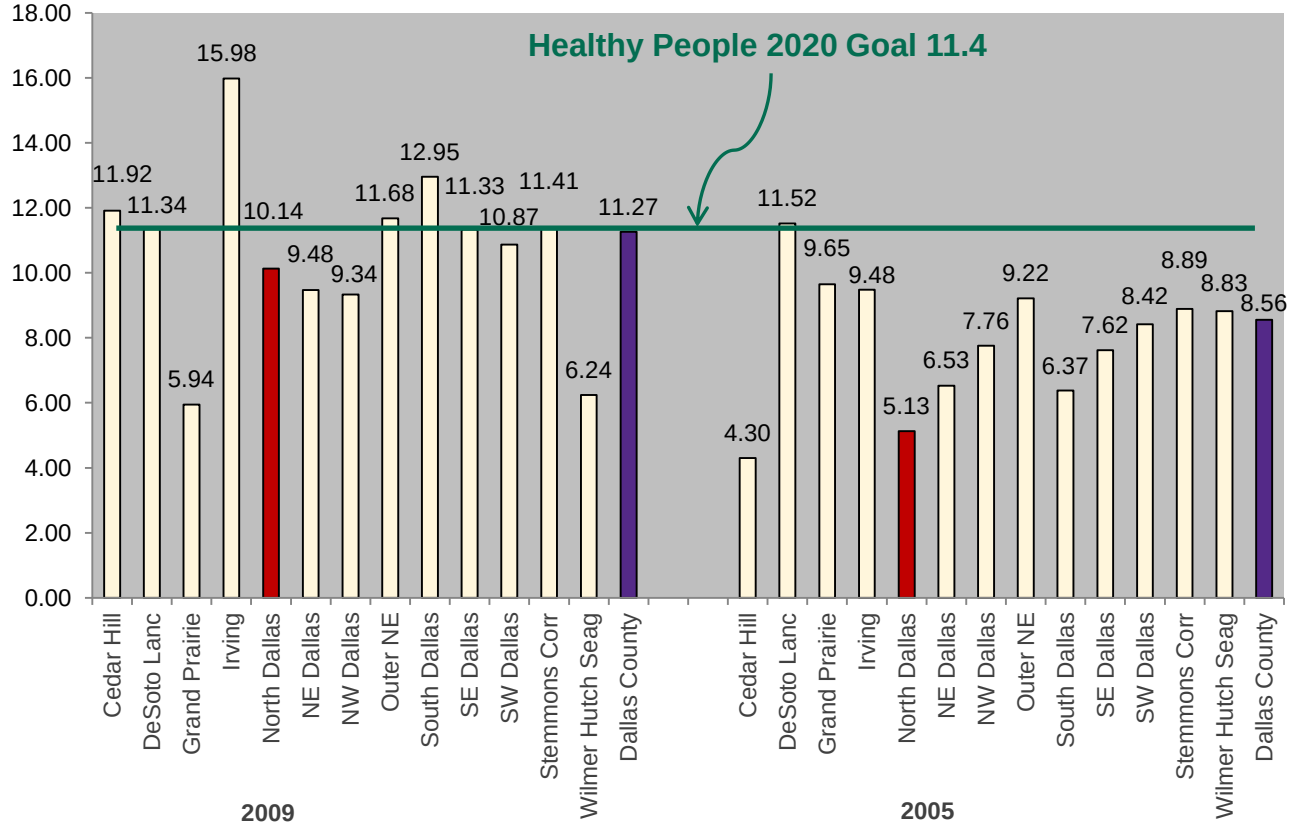




Source: Texas Department of State Health Services, Infectious Disease Control Unit, unpublished data; denominator population data from Claritas, Inc.; 2005 Dallas County data from Dallas County Health and Human Services web site: http://www.dallascounty.org/department/hhservices/services/communicable/documents/ReportableConditions2003-07Annual.pdf;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

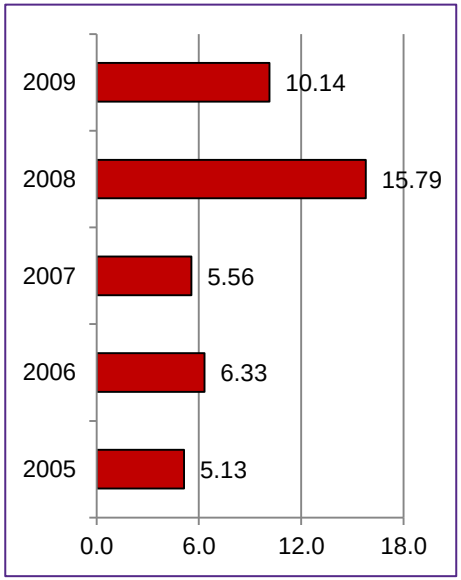
# Health Outcomes: Reportable Communicable Disease Rates

*North Dallas Service Area*

**Salmonellosis Incidence, per 100,000**



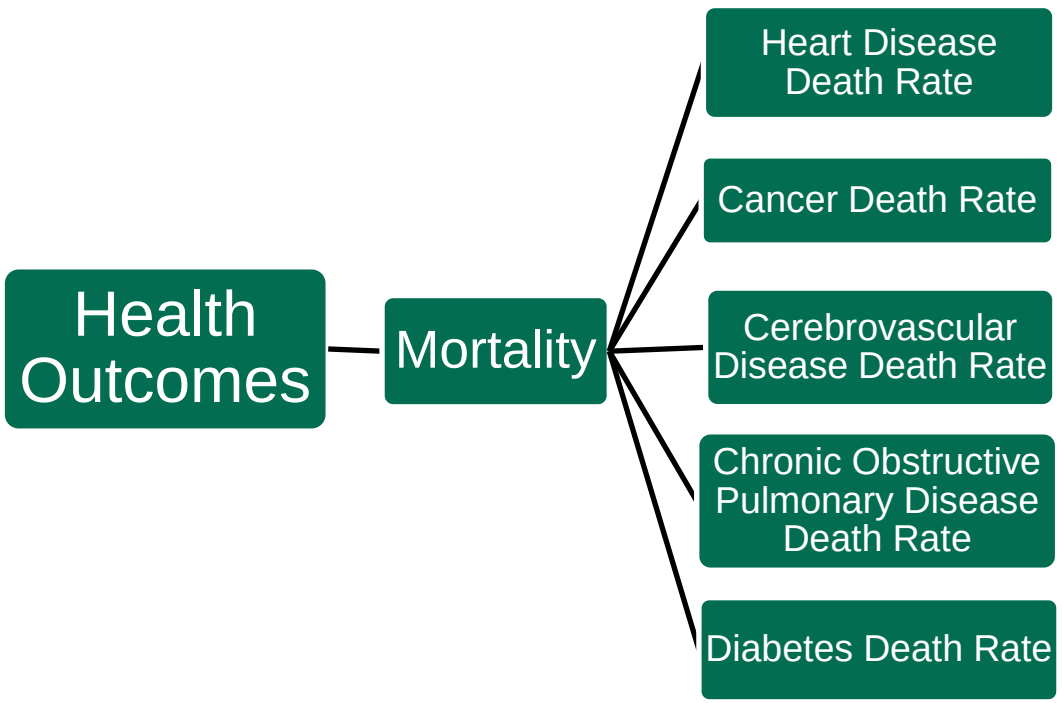

**Salmonellosis Incidence Rate, per 100,000, North Dallas Service Area**




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

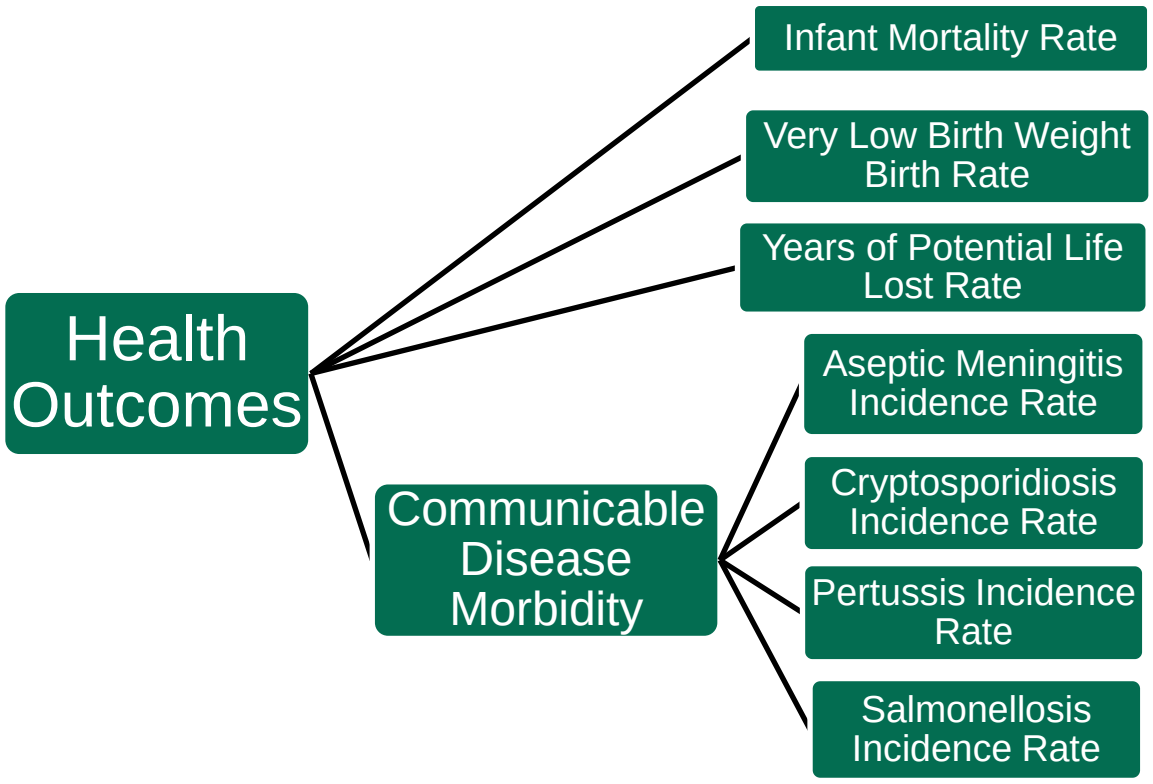
– Doing better than the benchmark
– Same as/not significantly different from the benchmark
– Worse than the benchmark




| North Dallas Compared to Healthy People 2020 Goal | North Dallas Compared to Other Service Areas (Quartiles) | North Dallas Compared to Past Years' Data (CI) |
|---|---|---|
| | | |
| | | |
| | | |
| N/A | | |
| N/A | | |

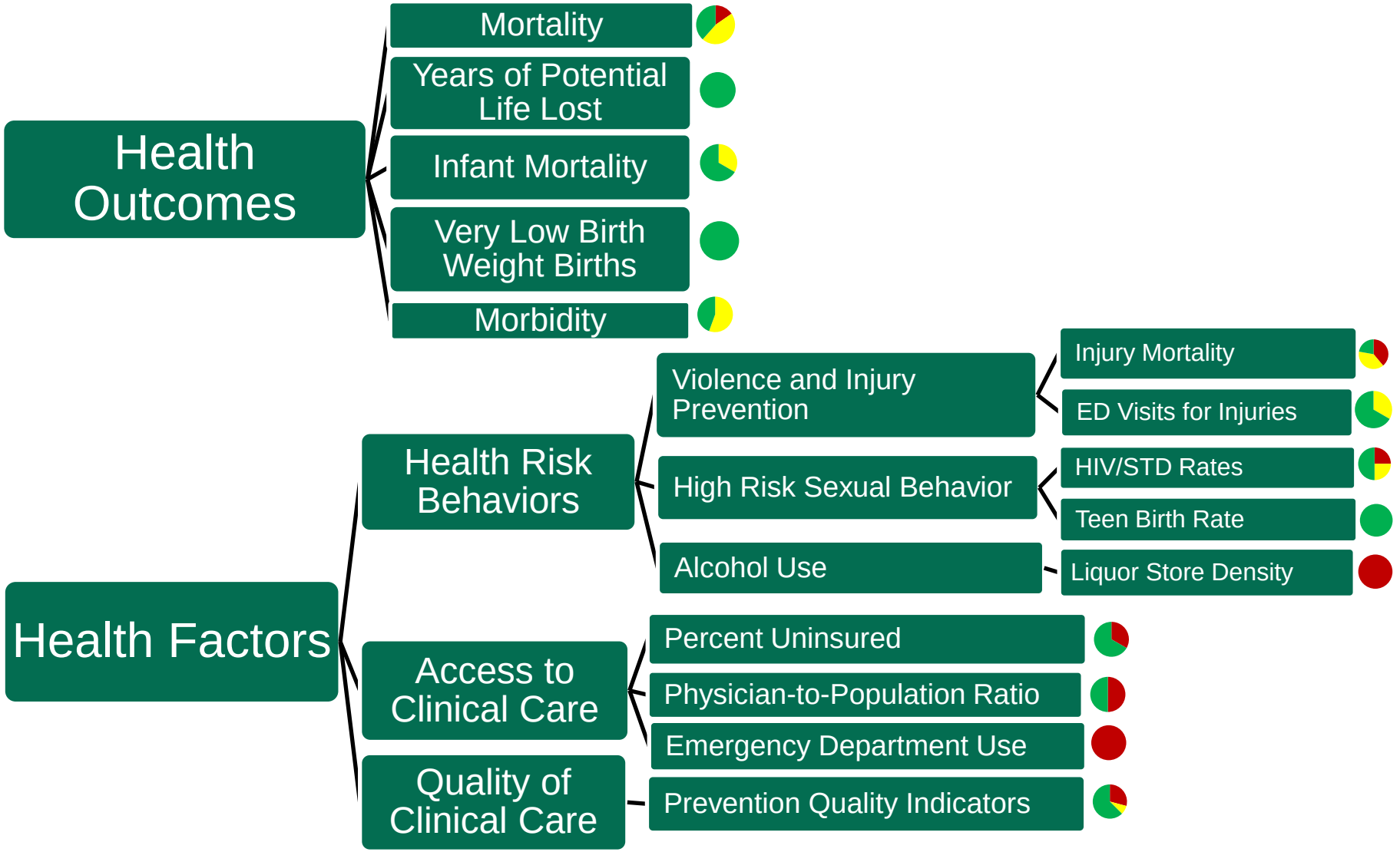
# Health Outcomes

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

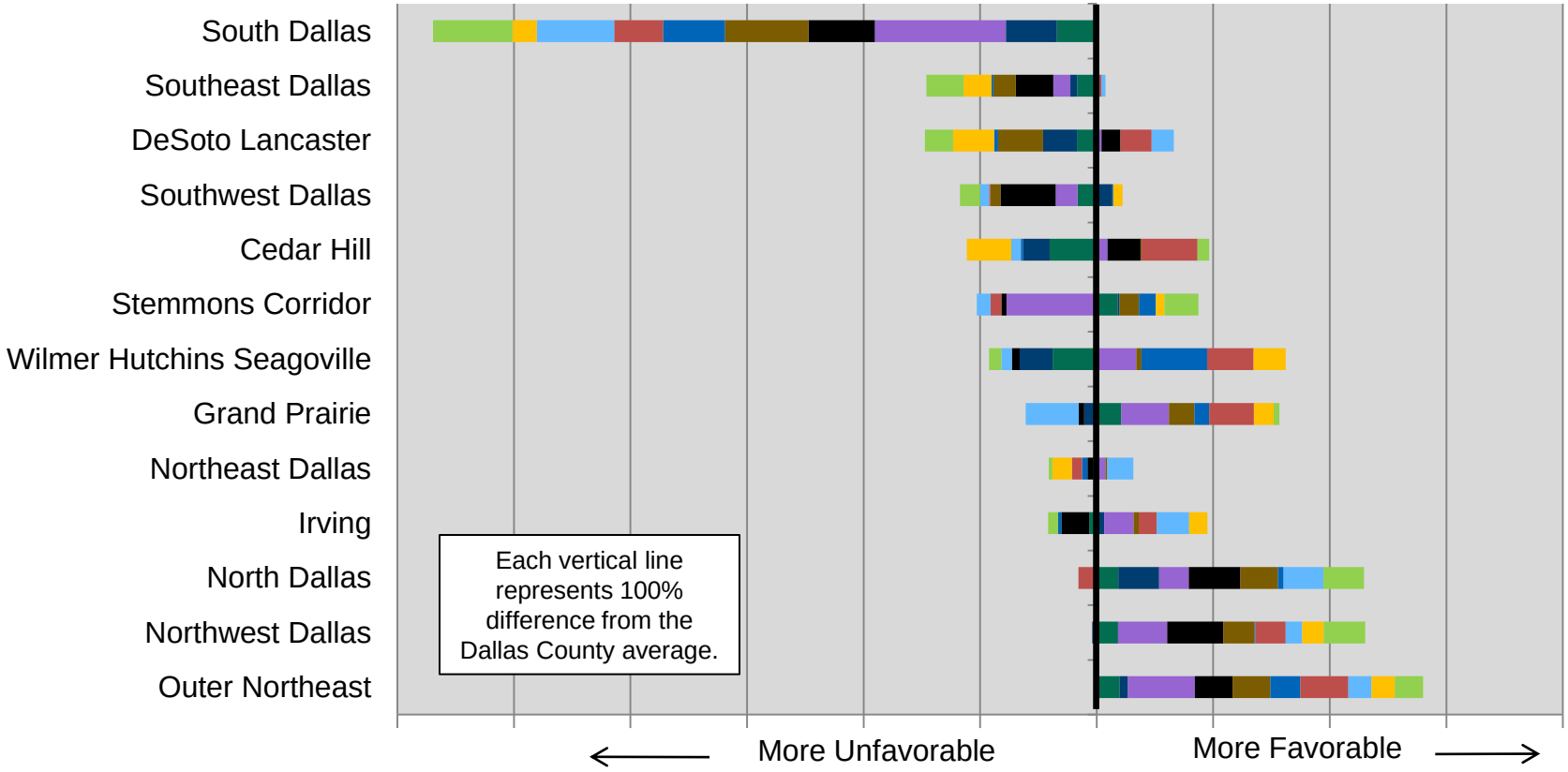



| North Dallas Compared to Healthy People 2020 Goal | North Dallas Compared to Other Service Areas (Quartiles) | North Dallas Compared to Past Years' Data (CI) |
|---|---|---|
| ● | ● | ● |
| ● | ● | ● |
| N/A | ● | ● |
| N/A | ● | ● |
| N/A | ● | ● |
| N/A | ● | ● |
| ● | ● | ● |

# Summary – Model With Stoplight Pie Charts, North Dallas Service Area



# Deviations from the Dallas County mean




NOTE: All data are from the years 2009-2012, 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 2011 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 2011 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 2011 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.
  - Then 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. Each category is given an the equal statistical weight (STDs, HIV and teen births), 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 2011 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 100,000), 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.**