

# Community Health Assessment

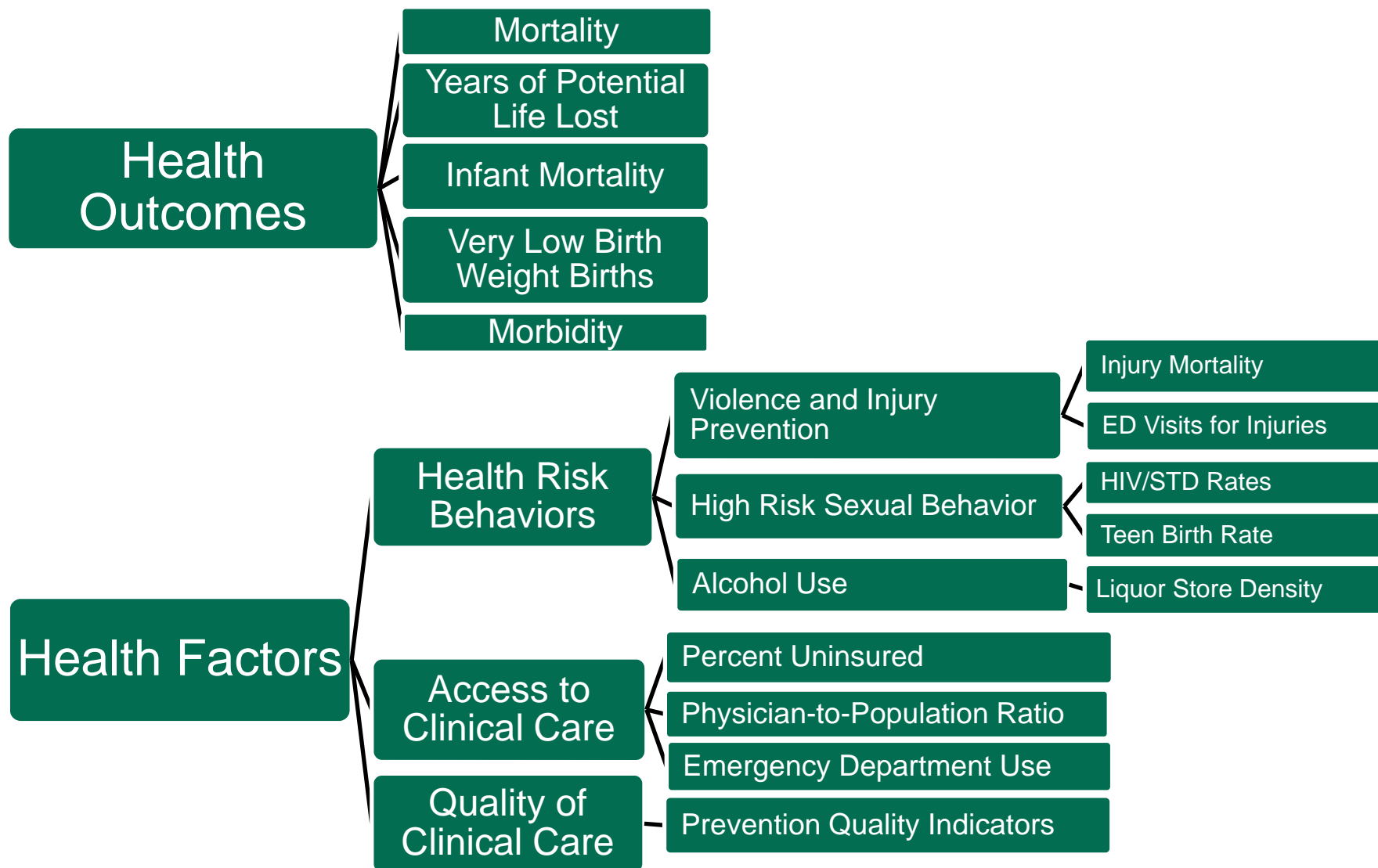
*Irving Service Area*



Parkland



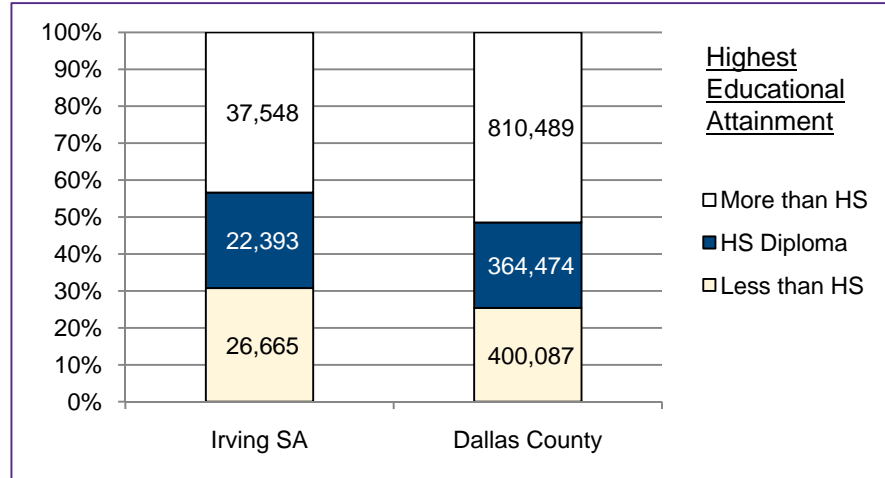
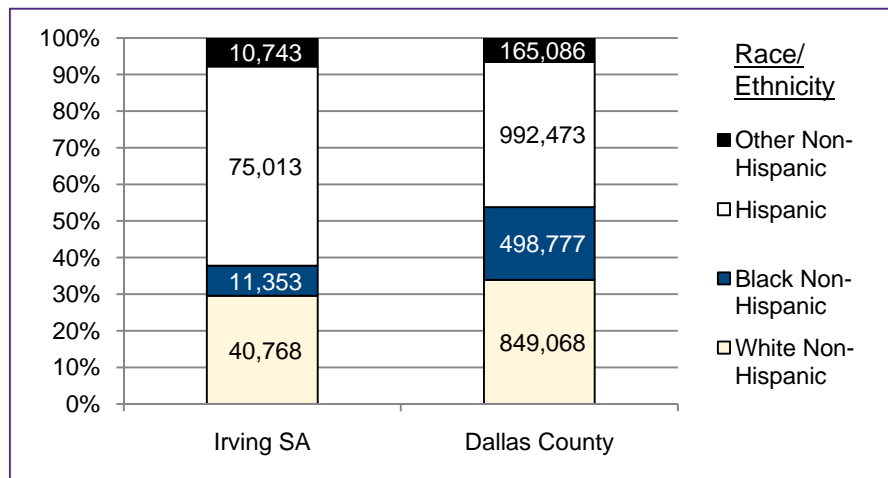
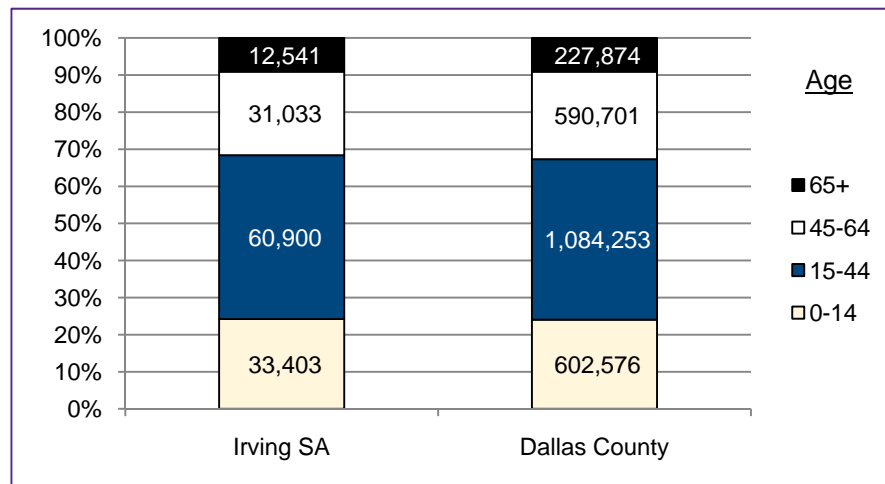
# Organizational Model For the Community Health Dashboard



# Demographic Profile

## *Irving Service Area*

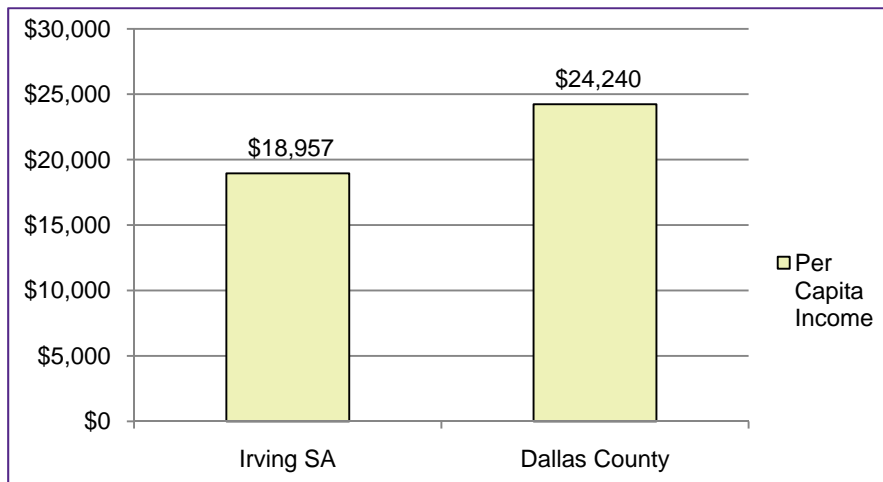
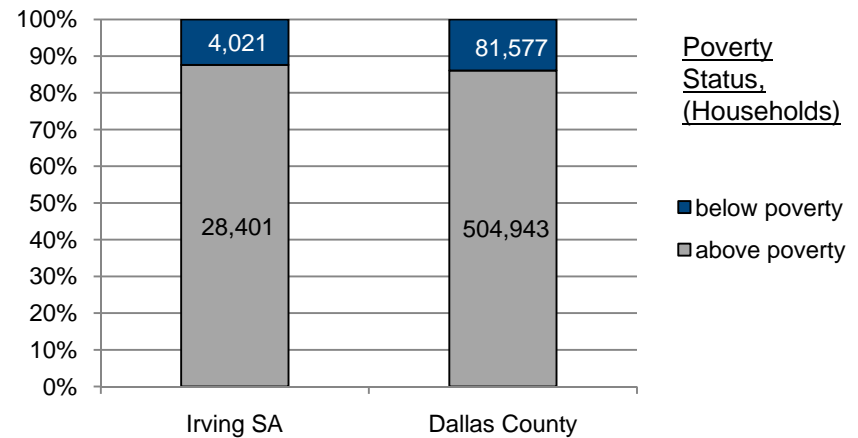
- The population age distribution of the Irving Service Area is similar to that of the county population with 24.2% under the age of 15 and 9.1% over the age of 65.
- The largest race/ethnic group in the Service Area population is Hispanics, comprising 54.5% of the population.
- Irving Service Area has a smaller proportion of people with a high school diploma or more (69.2%) compared with Dallas County as a whole (74.5%).



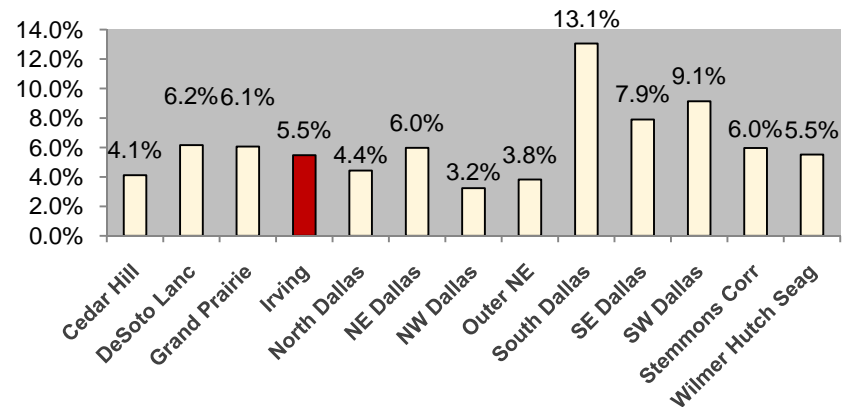
# Demographic Profile

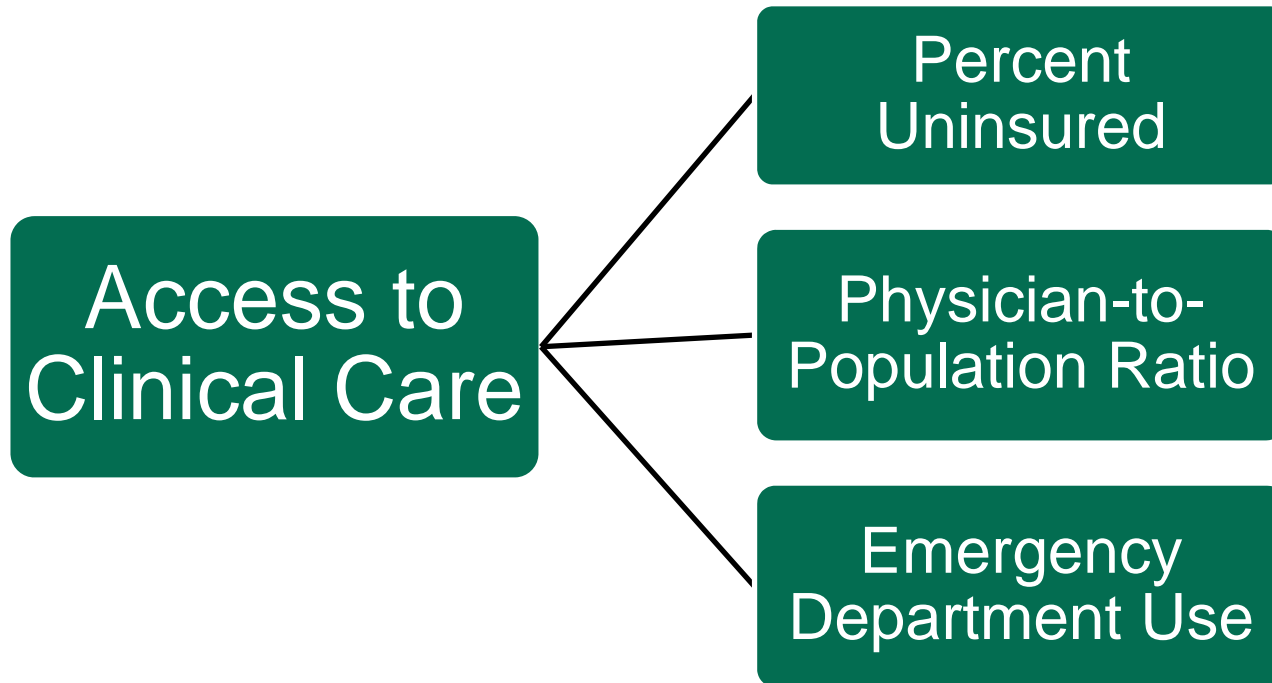
## Irving Service Area

- The Irving Area has a similar percentage of households in poverty (12.4%) as that of Dallas County-wide households (13.9%).
- The Service Area's per capita income was the 10<sup>th</sup> worst of the 13 service areas.
- The percent unemployed in this Service Area however was ranked fifth among the 13 service areas.



### Percent Unemployed in the Civilian Labor Force



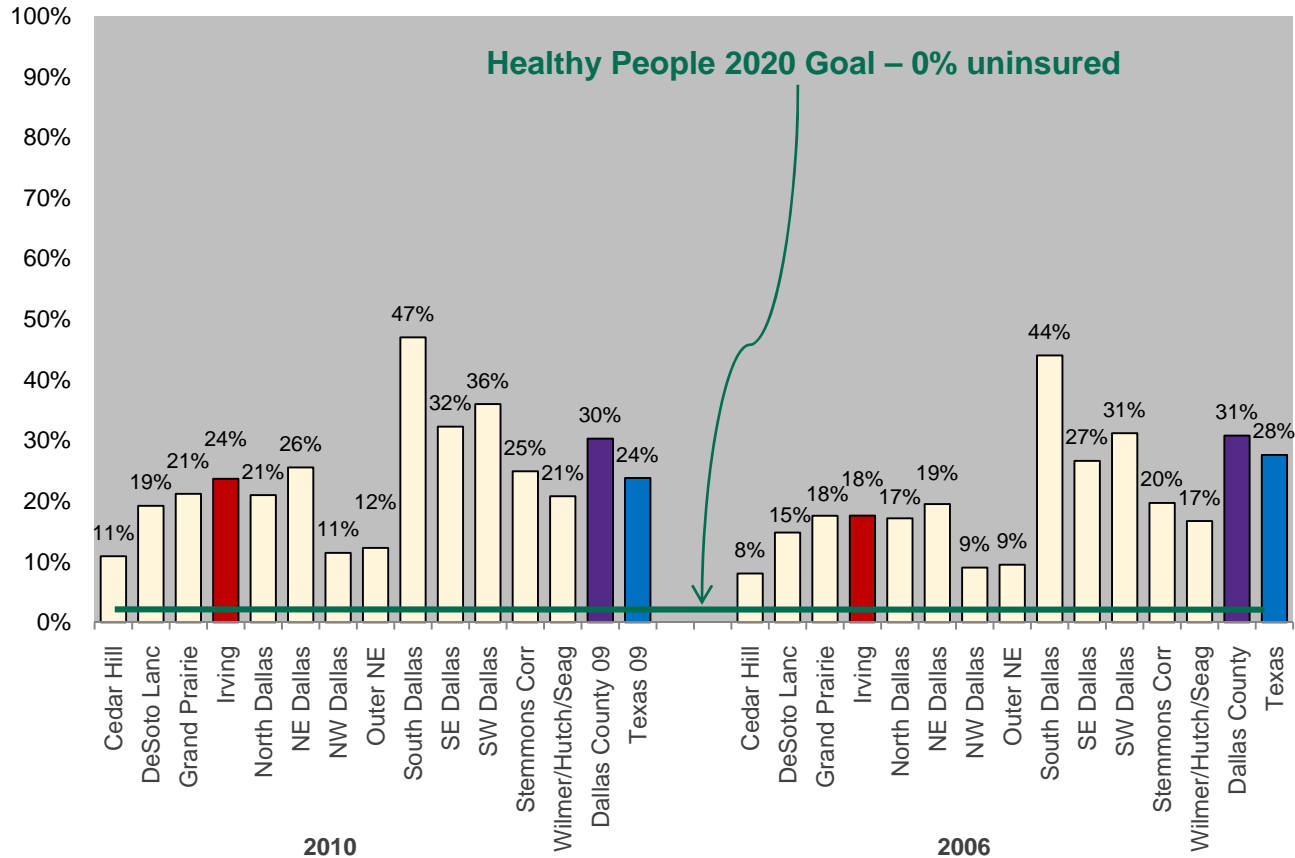




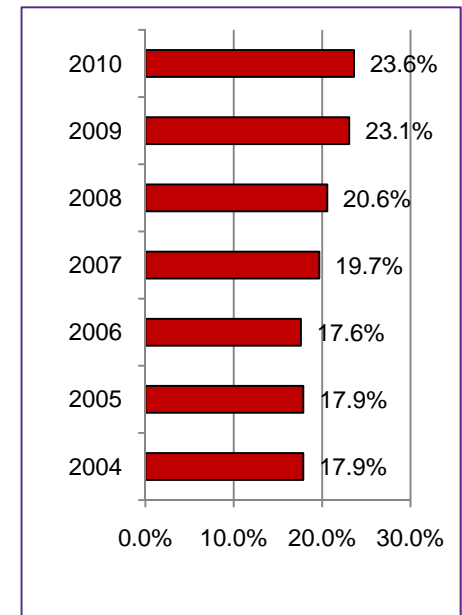
# Access to Healthcare: Percent Without Healthcare Insurance

## Irving Service Area

### Percent Uninsured



### Percent Without Health Insurance, Irving Service Area

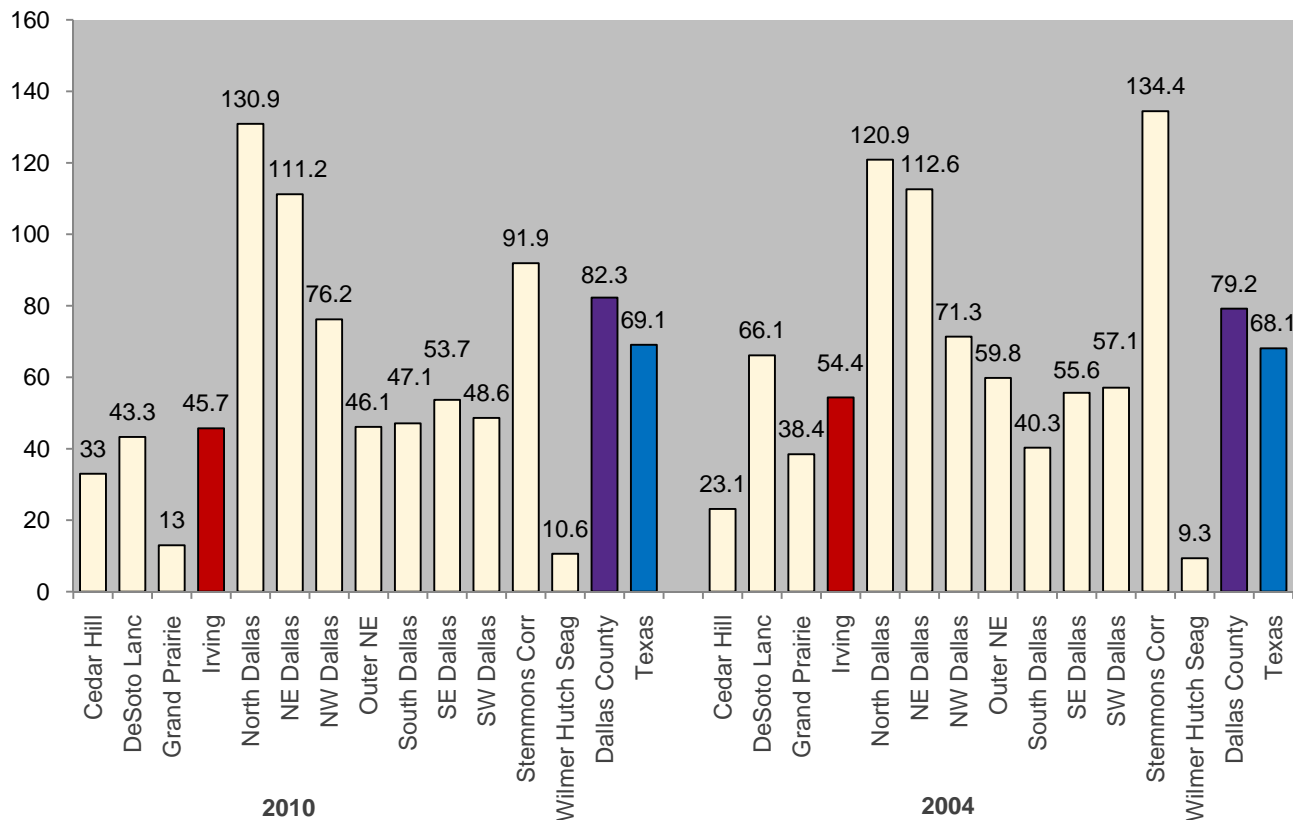


Source: 2006 Solucient, Inc.; 2010 Market Planner Plus; Denominator population data from Claritas, Inc.; except 2010 from Pop-Facts ; Dallas County and Texas rates from US Census Bureau's American Community Survey 2009

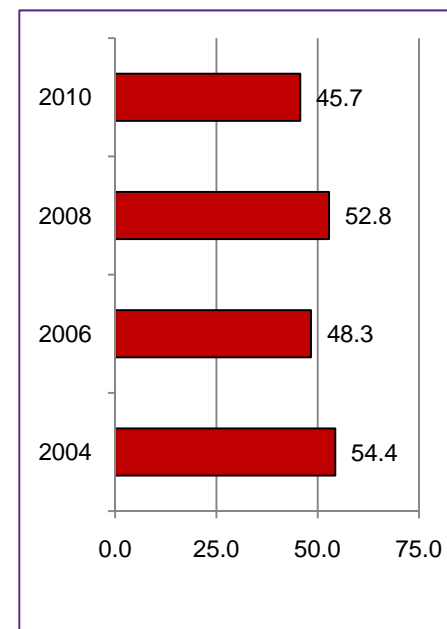
# Access to Healthcare: Primary Care Physician-to-Population Ratio

## Irving Service Area

Primary Care Physicians per 100,000



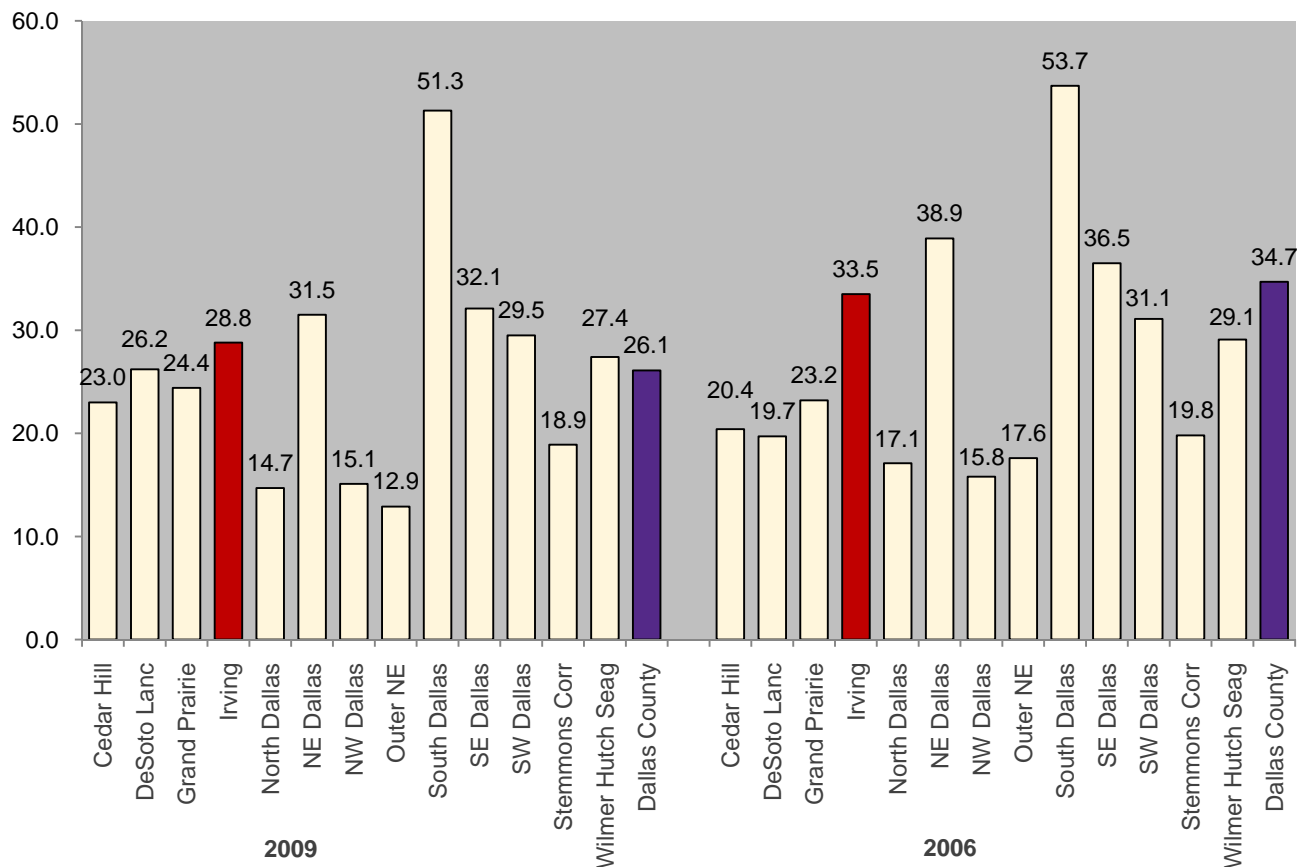
Primary Care Physician-to-Population Ratio, per 100,000, Irving Service Area



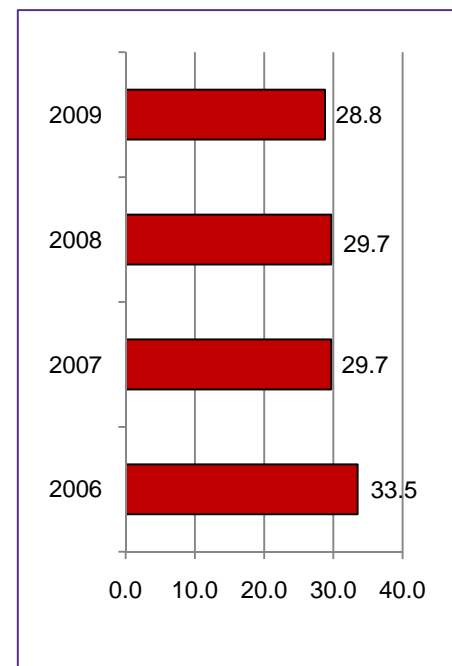
Source: Texas Medical Association Physician Practice Address files; denominator population data from Claritas, Inc., except 2010 from Nielson/Claritas, Inc. Pop Facts. Mid 2010 version.

County and State 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/](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>




Non-Emergent ED Visits, per 1,000 Population

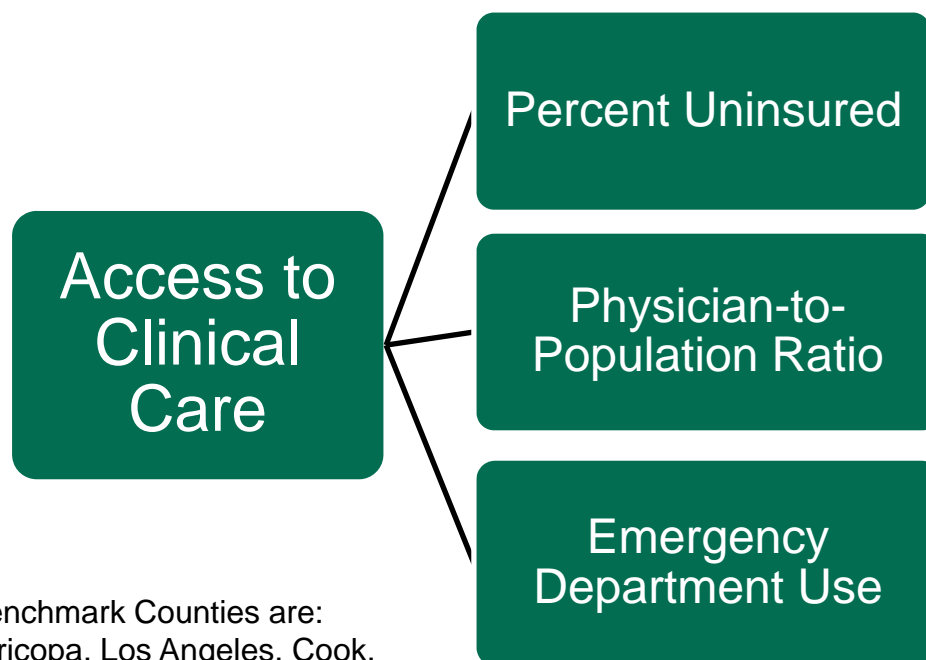


Rate of Non-Emergent ED Visits, per 1,000, Irving Service Area









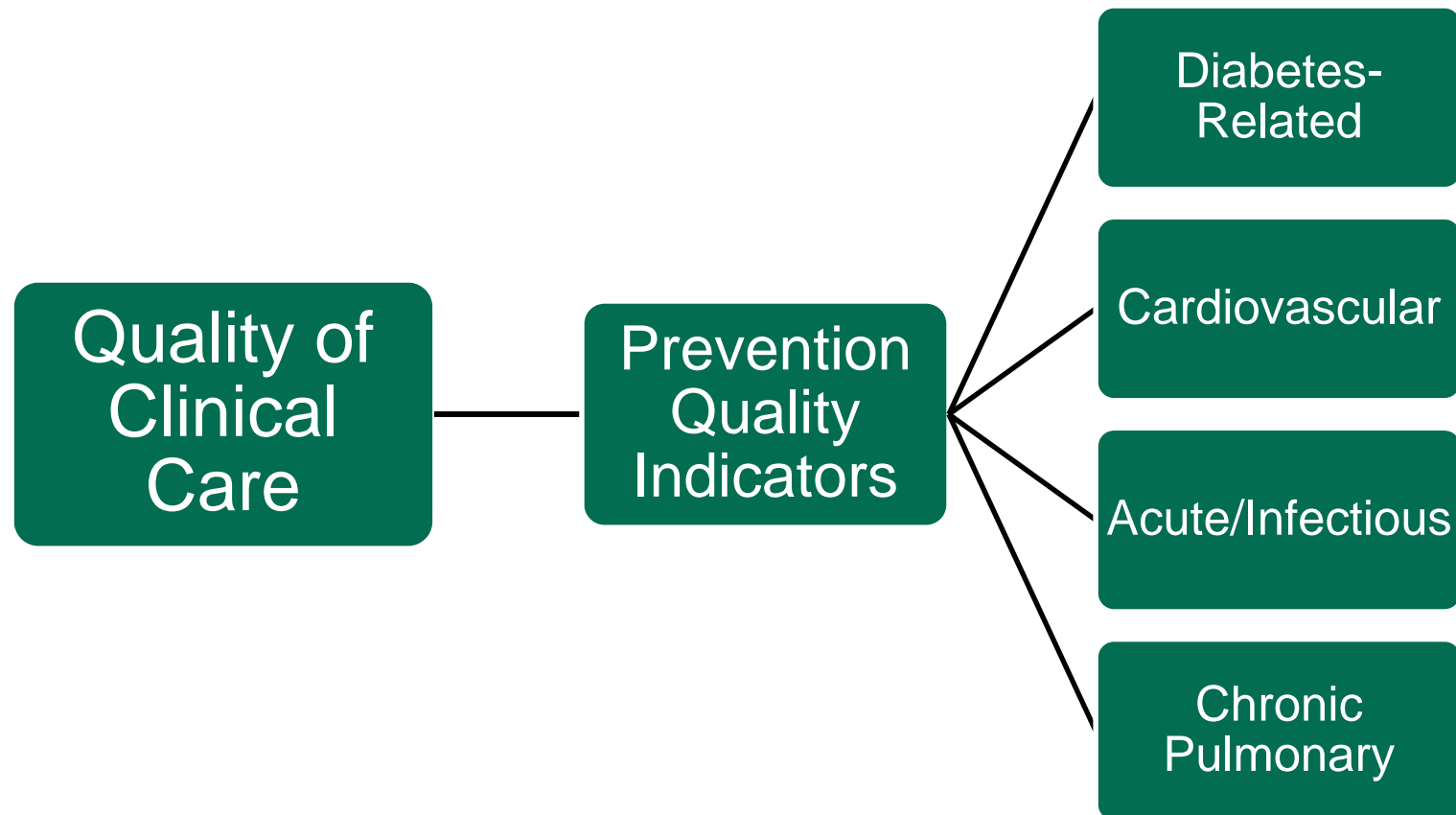
Source : DFWHC, Outpatient Data System; NYU Algorithm for determining appropriate Emergency Dept. Use; denominator population data from Claritas, Inc.

-  – 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

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

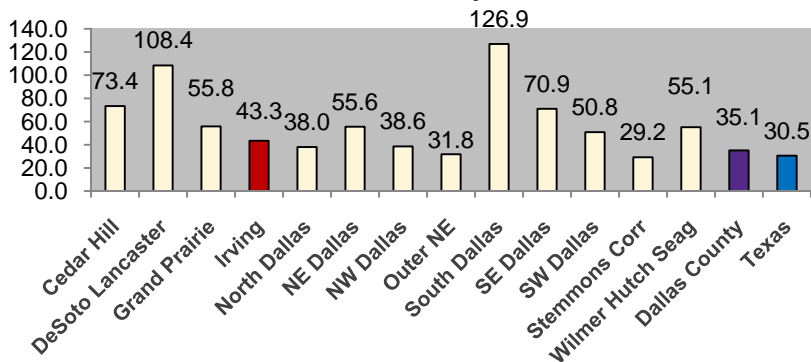


# Healthcare Quality: Rate of Preventable Hospitalizations, 2008

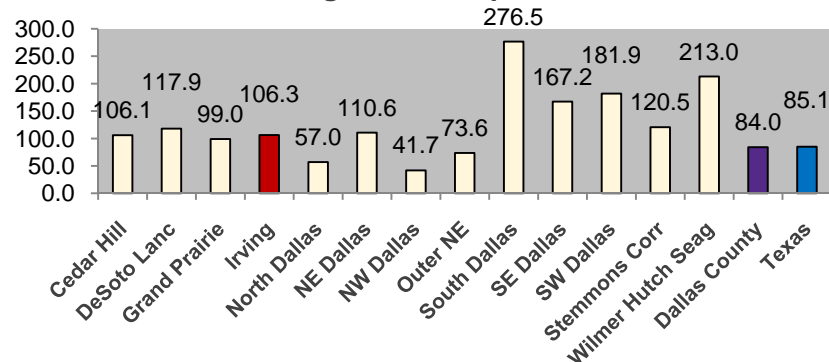
## Diabetes-Related Hospitalizations

### *Irving Service Area*

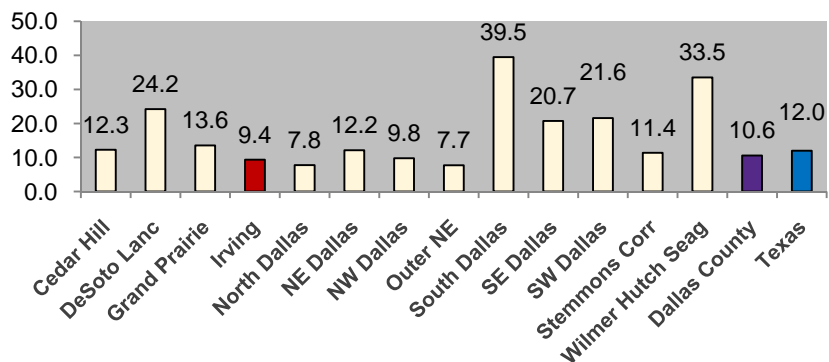
**Diabetes Short Term Complications, 2008**



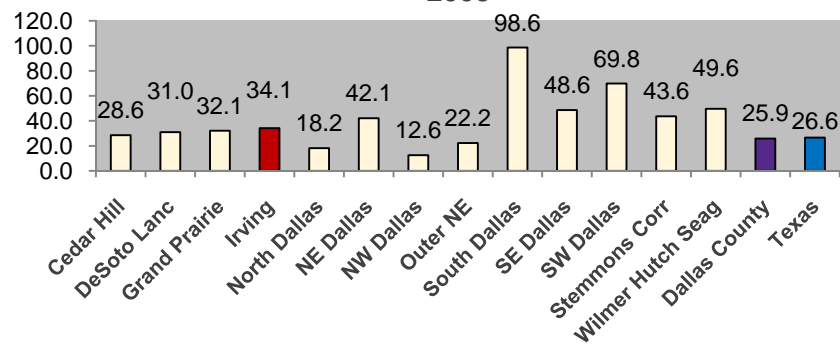
**Diabetes Long Term Complications, 2008**



**Uncontrolled Diabetes, 2008**



**Lower Extremity Amputation Among Diabetics, 2008**

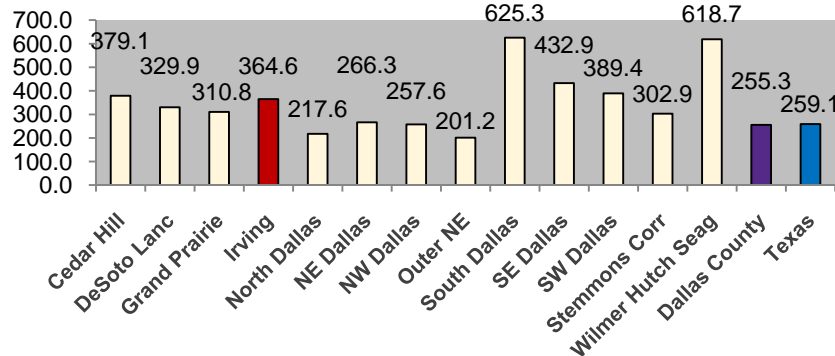


# Healthcare Quality: Rate of Preventable Hospitalizations, 2008

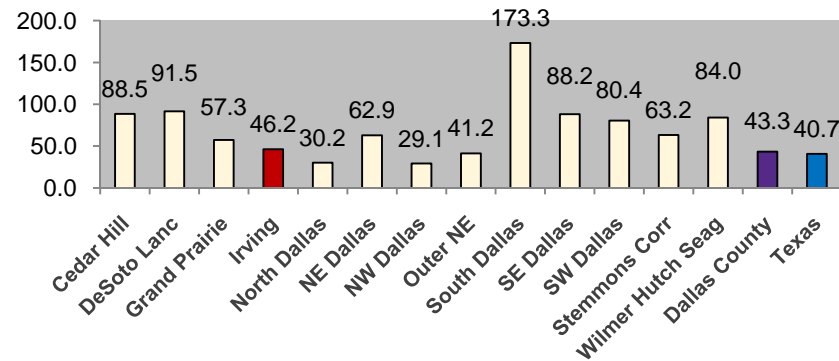
## Cardiovascular Disease Hospitalizations

### *Irving Service Area*

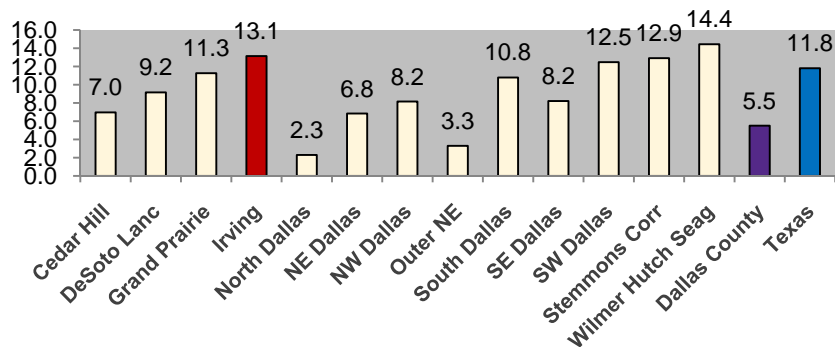
**Congestive Heart Failure, 2008**



**Hypertension, 2008**



**Angina Without Cardiac Procedure, 2008**

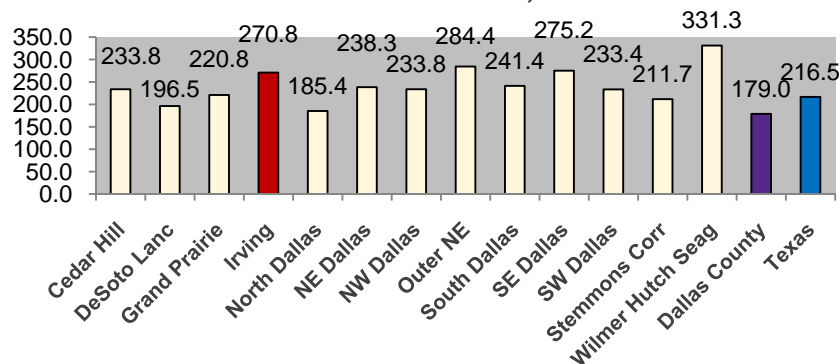


# Healthcare Quality: Rate of Preventable Hospitalizations, 2008

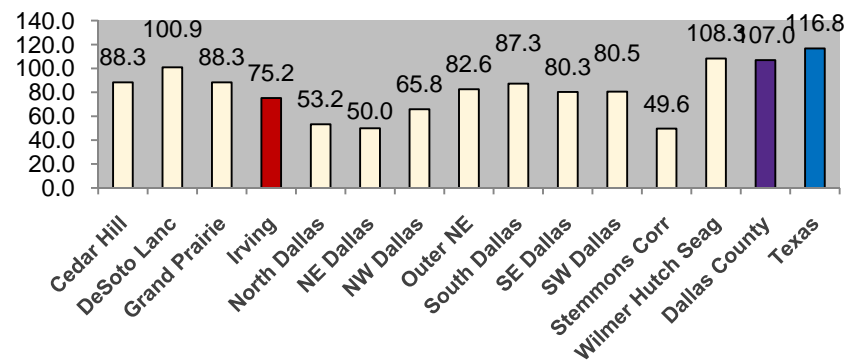
## Acute/Infectious Disease Hospitalizations

### *Irving Service Area*

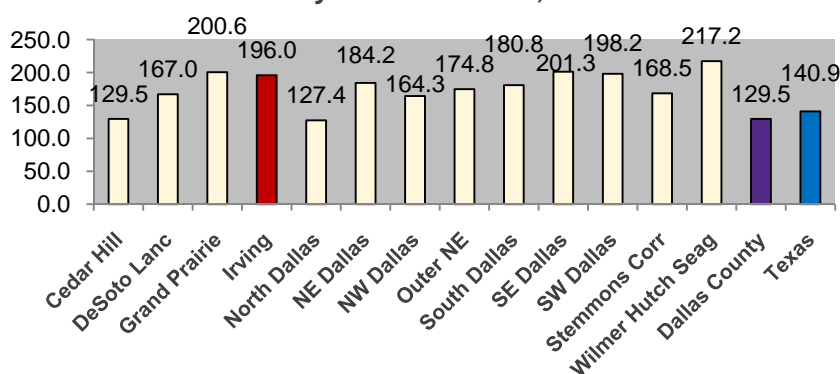
**Bacterial Pneumonia, 2008**



**Dehydration, 2008**



**Urinary Tract Infection, 2008**

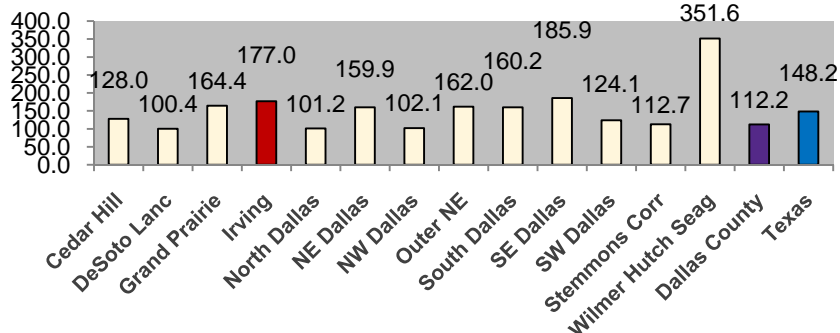


# Healthcare Quality: Rate of Preventable Hospitalizations, 2008

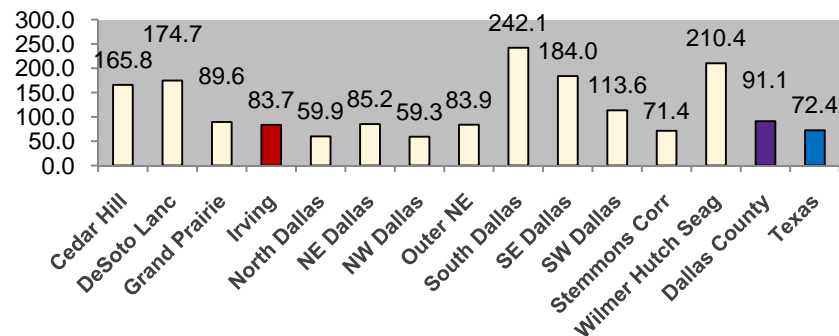
## Chronic Pulmonary Disease Hospitalizations




### *Irving Service Area*

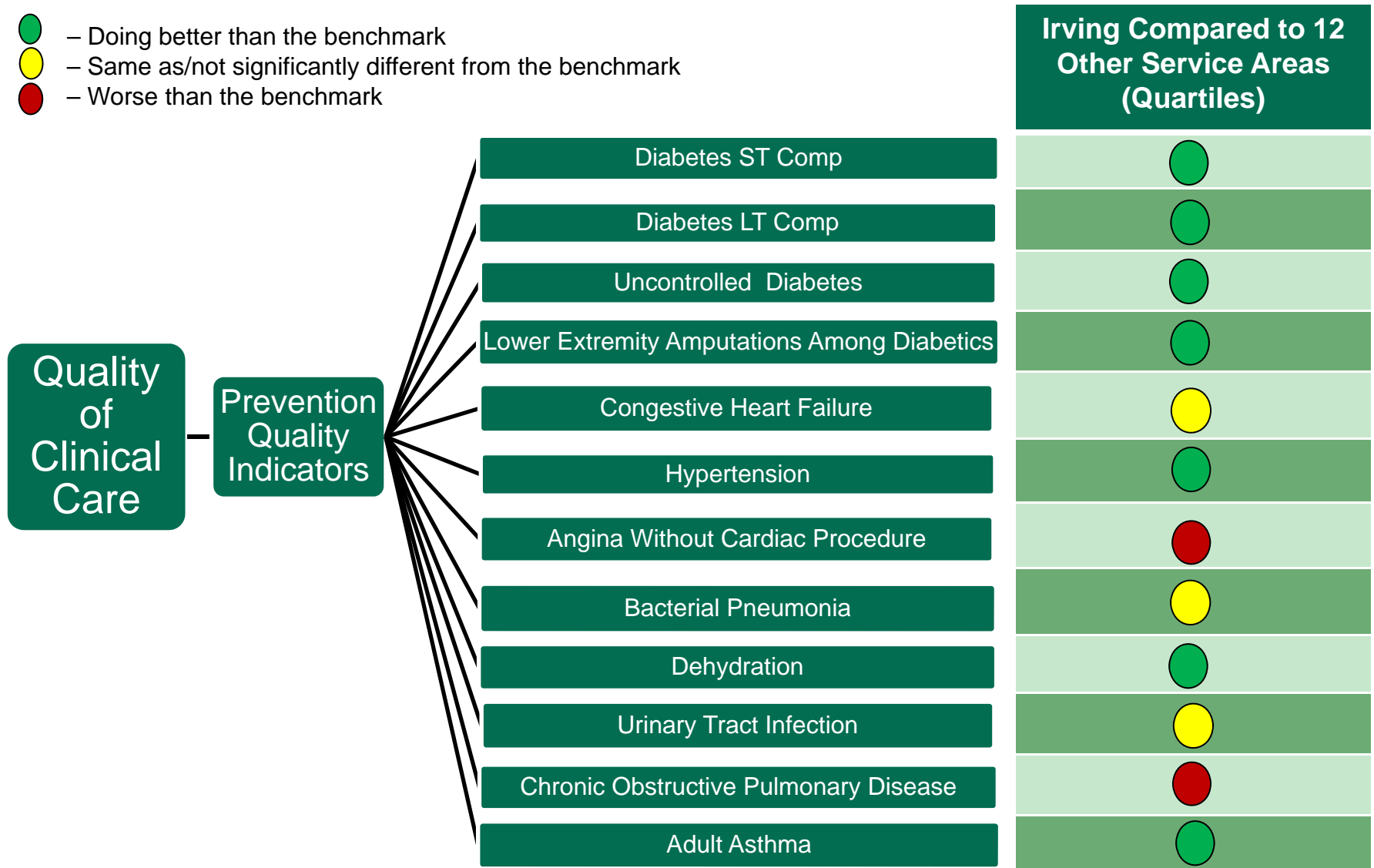
**Chronic Obstructive Pulmonary Disease, 2008**

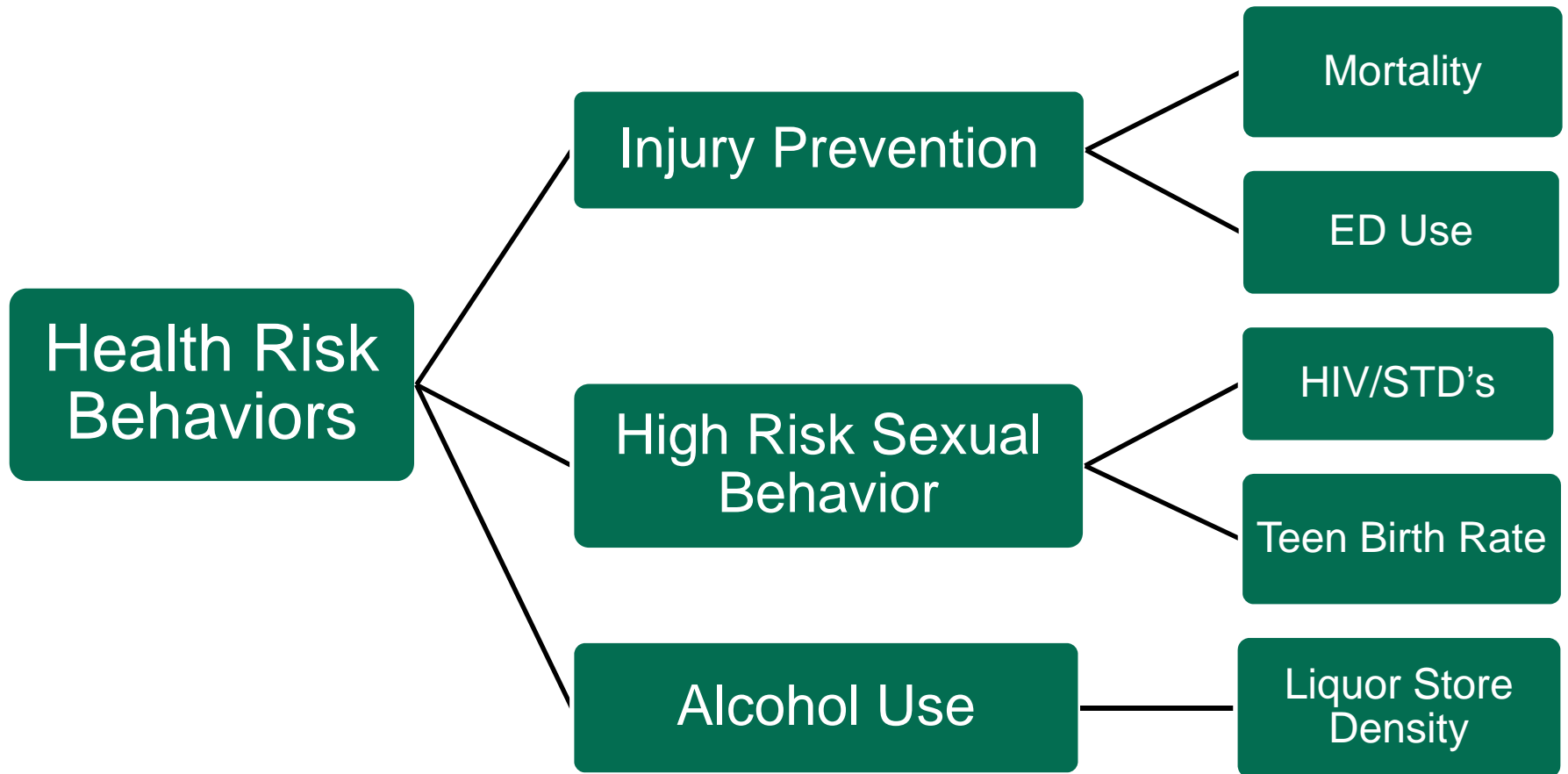


**Adult Asthma, 2008**



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



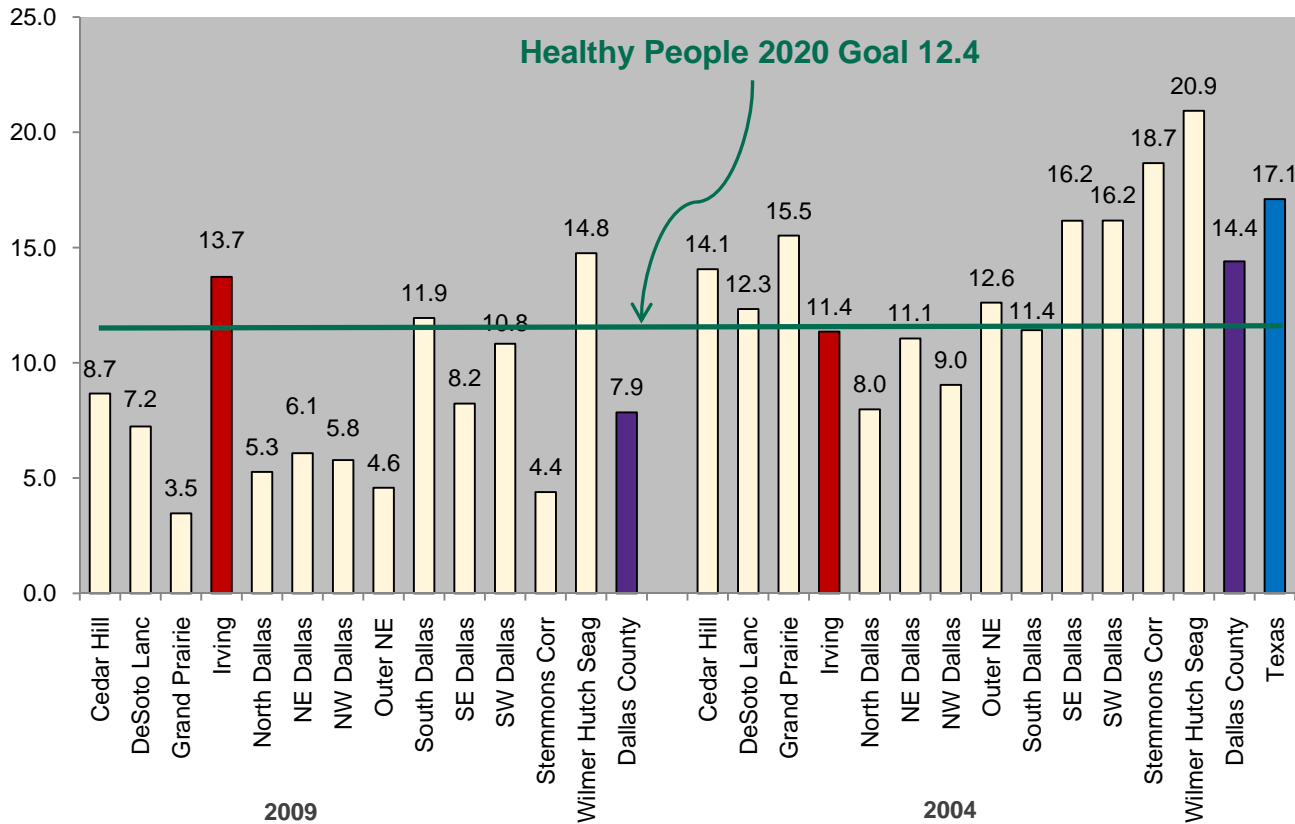




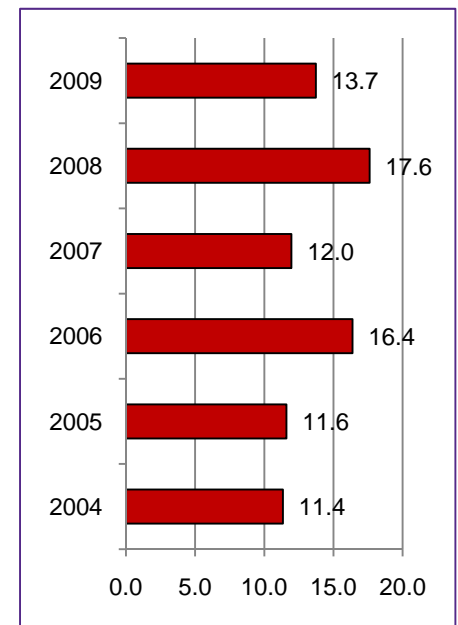
# Risk Factors: Auto Accident Mortality Rates

*Irving Service Area*

Age-Adjusted Deaths per 100,000



Auto Accident Mortality Rate, Age-Adjusted Death Rate per 100,000, Irving Service Area

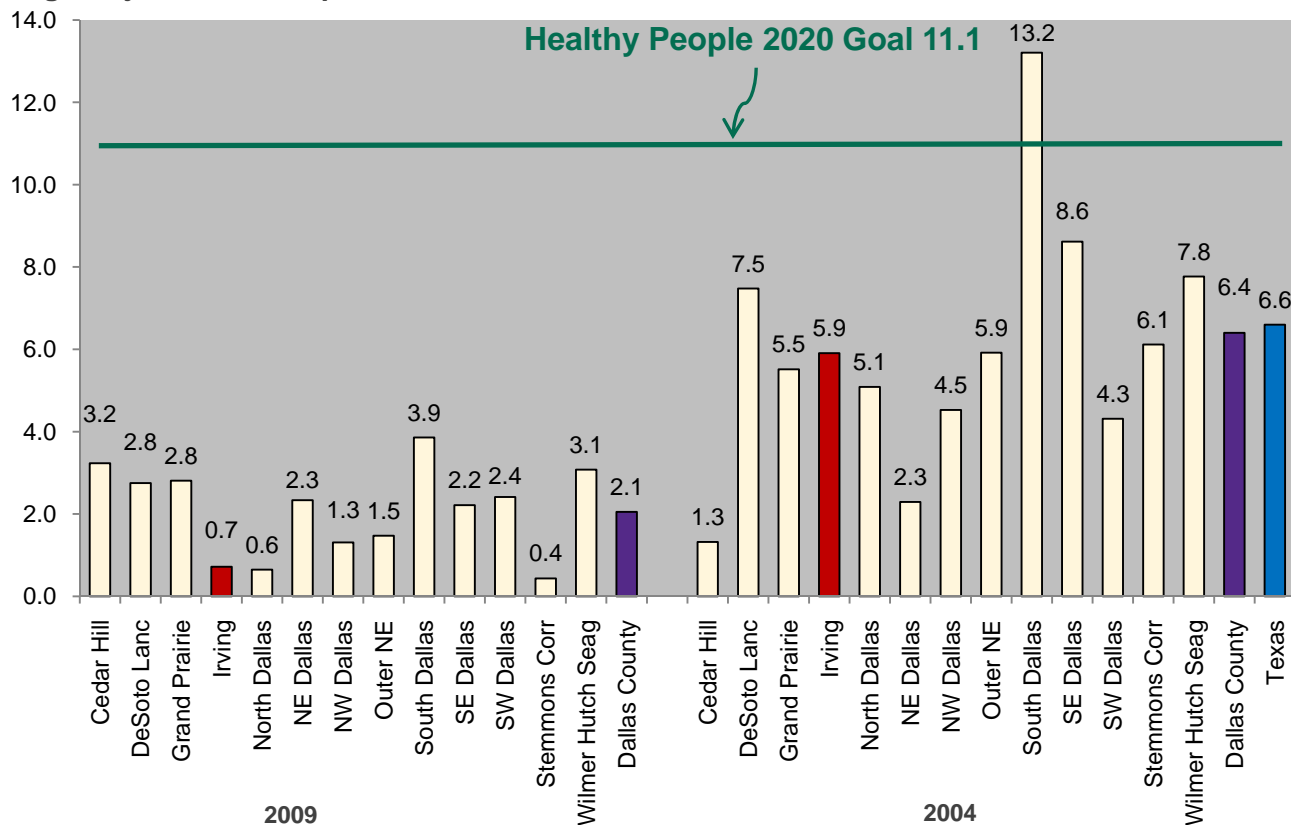


Source: Texas Department of State Health Services, Bureau of Vital Statistics; denominator population data from Claritas, Inc.

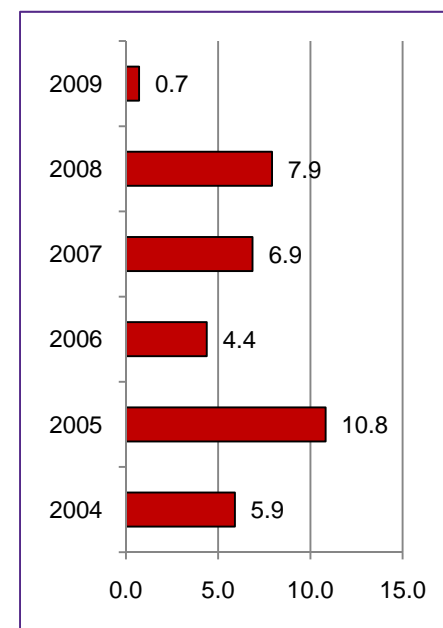
# Risk Factors: Accidental Poisoning Mortality Rates

*Irving Service Area*

Age-Adjusted Deaths per 100,000



Accidental Poisoning Mortality Rate, Age-Adjusted Death Rate per 100,000, Irving Service Area



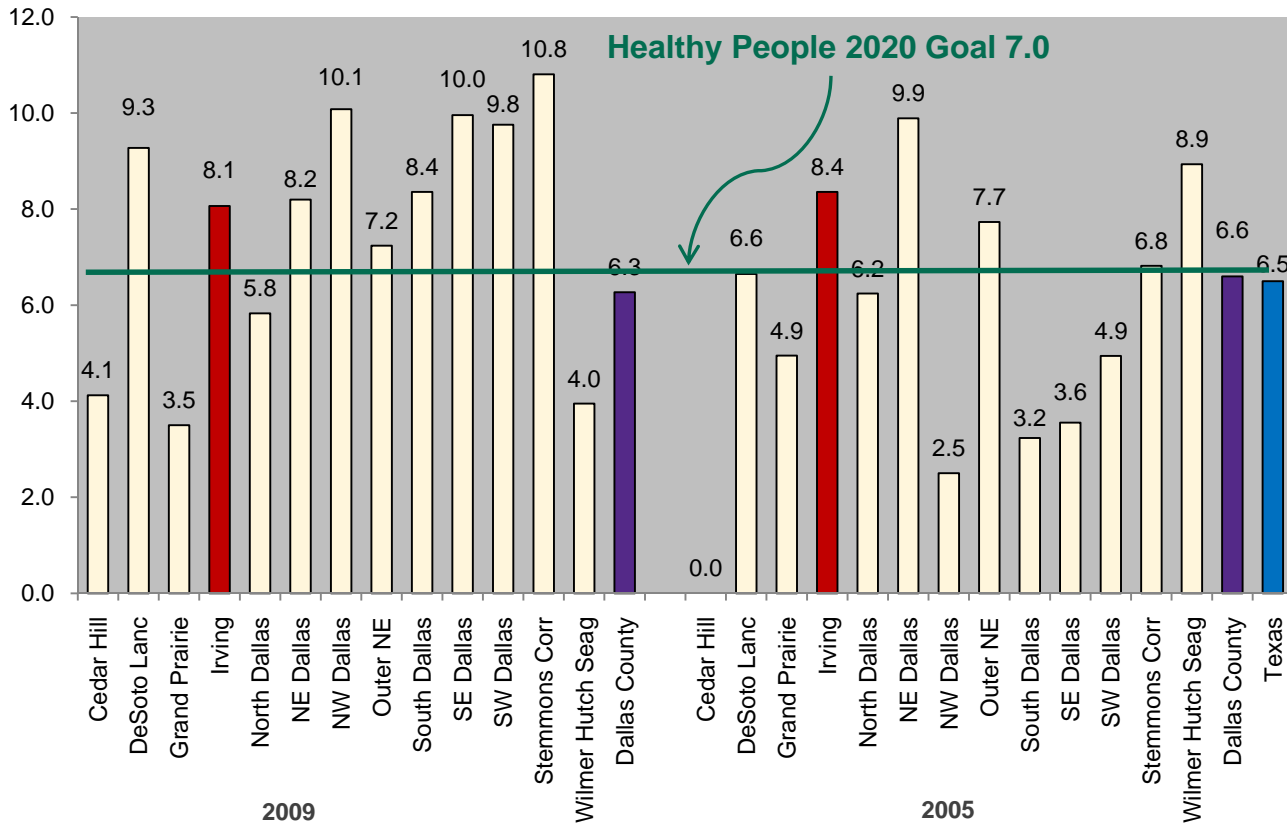
Source: Texas Department of State Health Services, Bureau of Vital Statistics; denominator population data from Claritas, Inc.



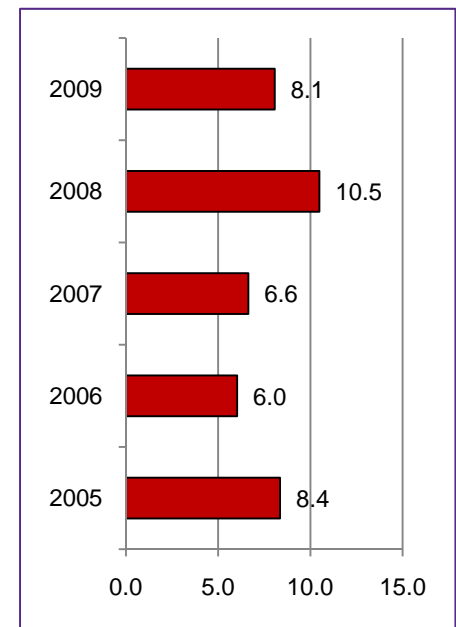
# Risk Factors: Accidental Falls Mortality Rates

*Irving Service Area*

Age-Adjusted Deaths per 100,000



Accidental Falls Mortality Rate, Age-Adjusted Death Rate per 100,000, Irving Service Area

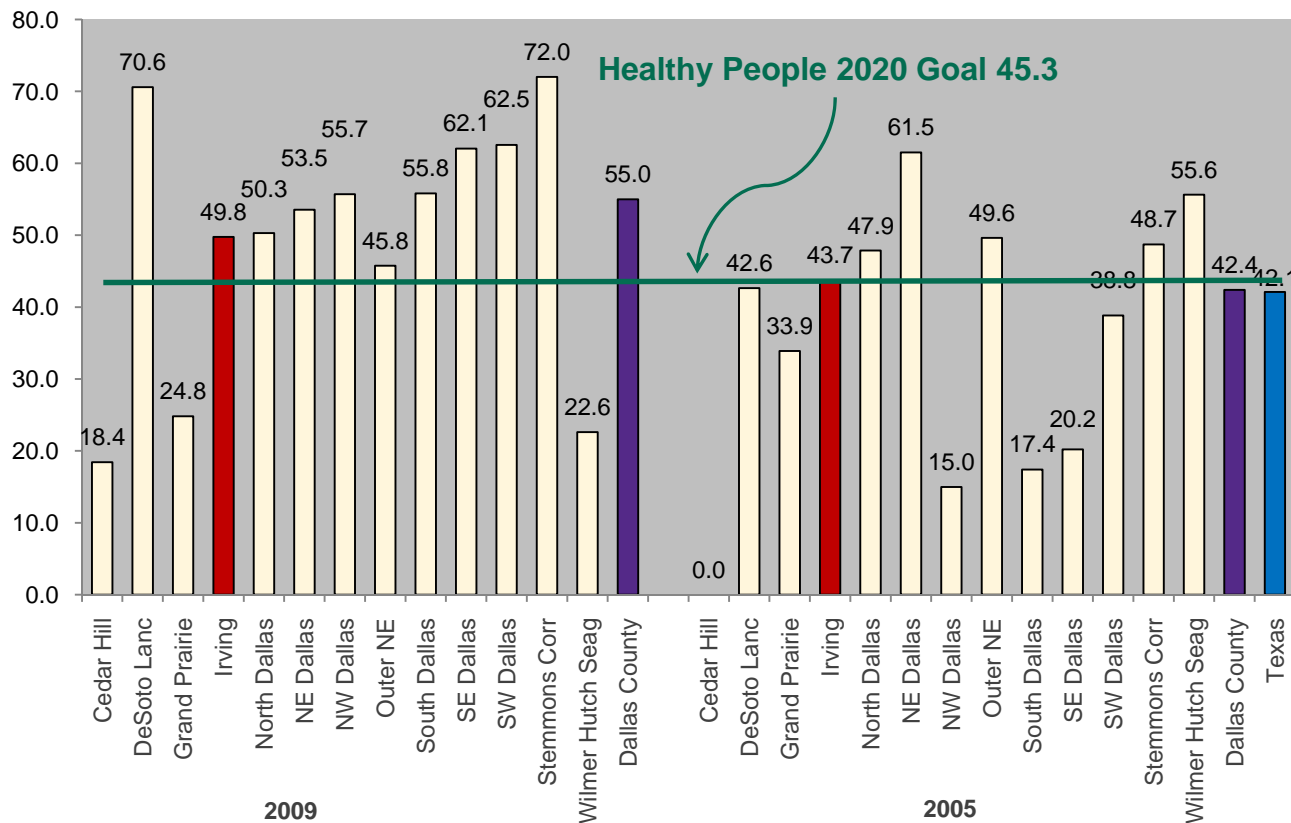


Source: Texas Department of State Health Services, Bureau of Vital Statistics; denominator population data from Claritas, Inc.

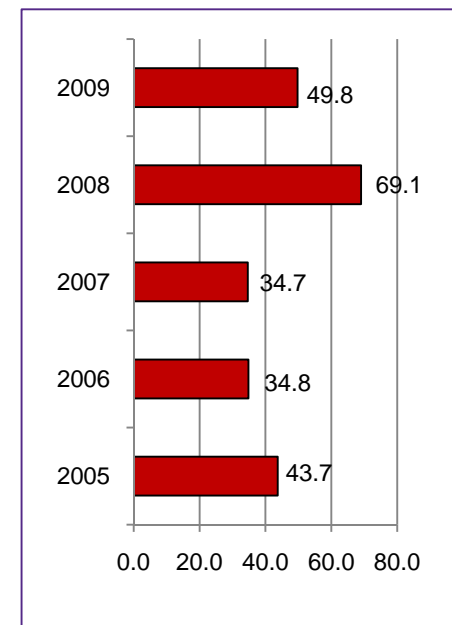
# Risk Factors: Falls Death Rates Among Seniors

## Irving Service Area

Falls Deaths Age 65+



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



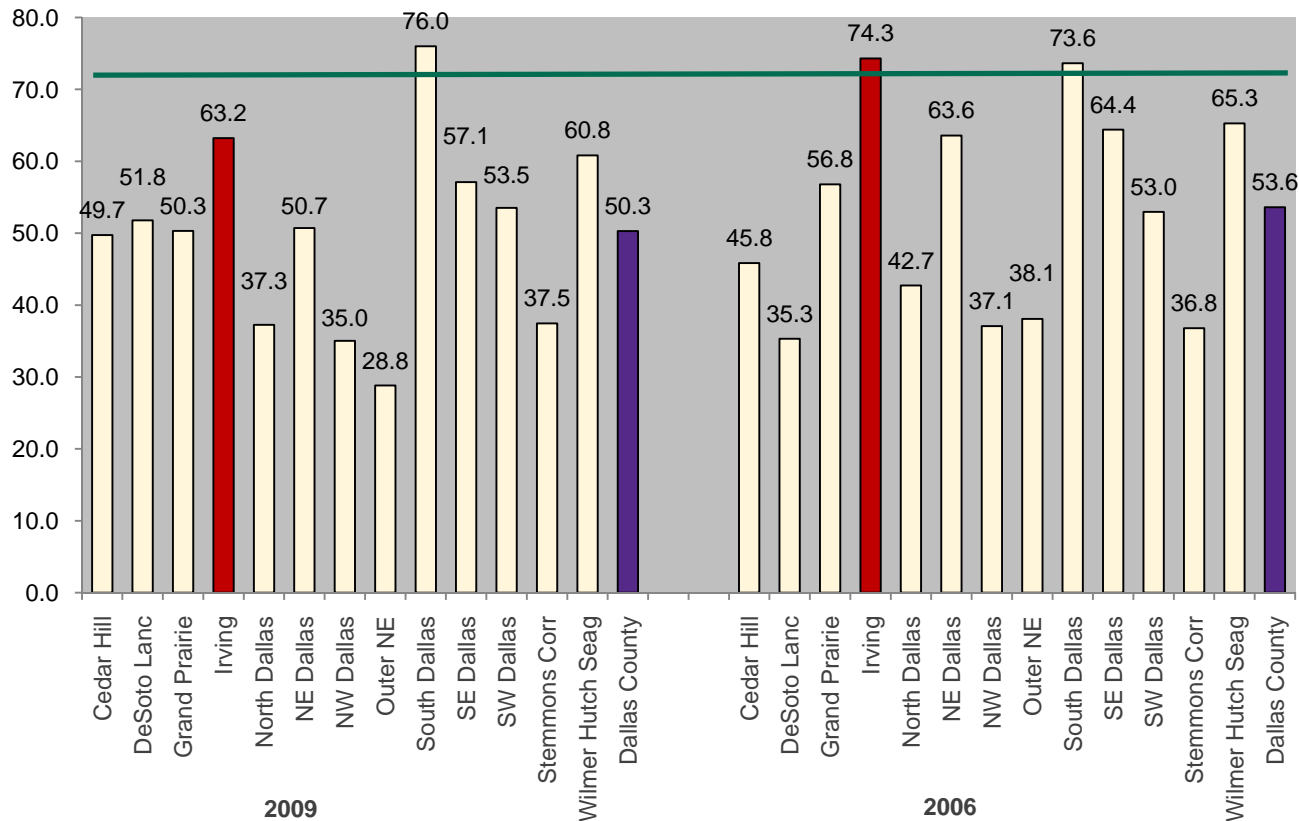
Source: Texas Department of State Health Services, Bureau of Vital Statistics, unpublished data; denominator population data from Claritas, Inc.; 2005 Dallas County data from Centers for Disease Control and Prevention, National Center for Health Statistics. Multiple Cause of Death File 2005-2006. CDC 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: Rate of Injury-Related ED Visits

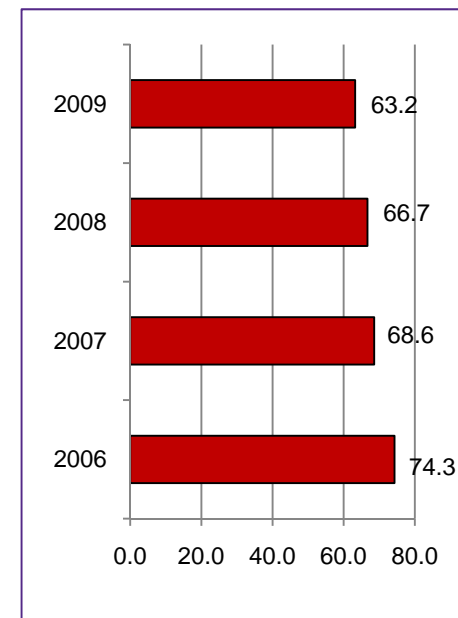
*Irving Service Area*

Rate of Injury-Related ED Visits

Healthy People 2020 Goal 73.3



Rate of Injury-Related ED Visits, per 1,000, Irving Service Area

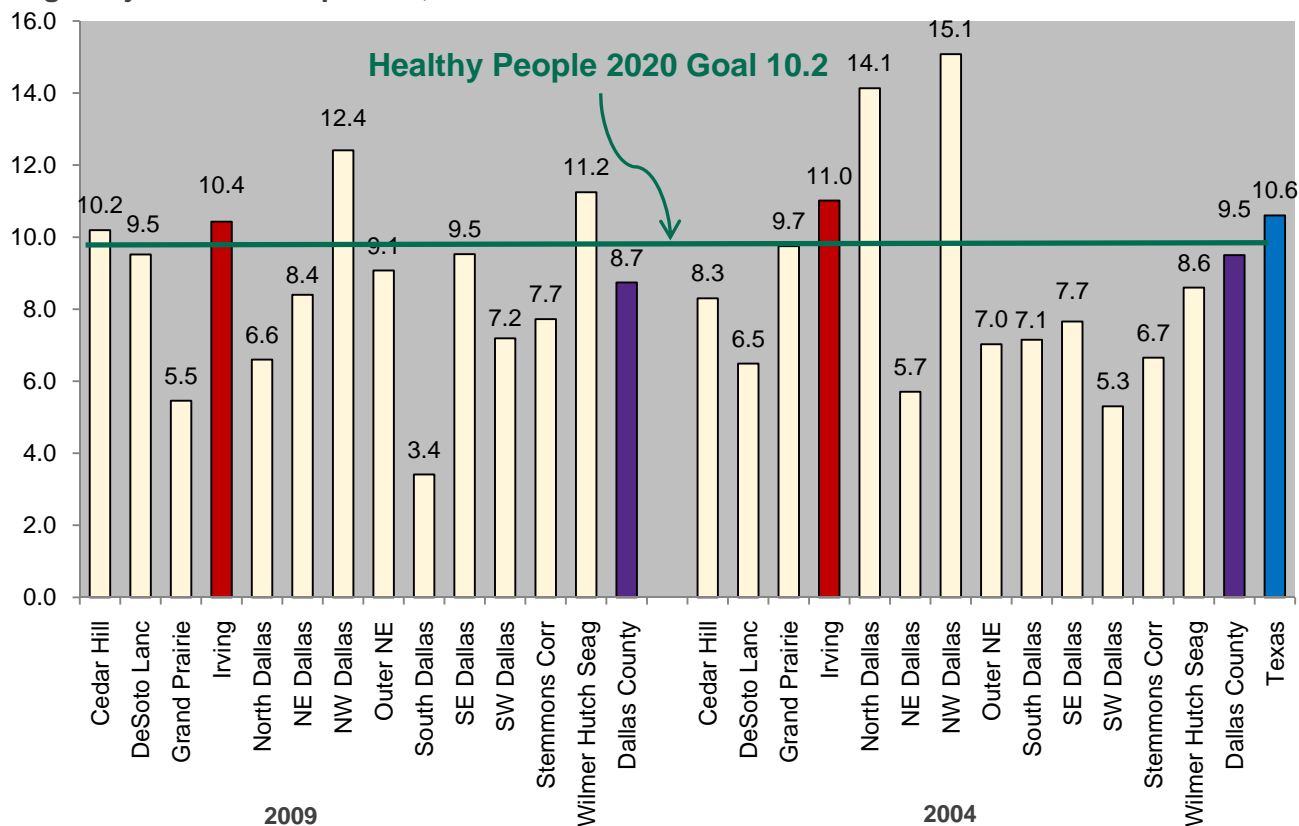


Source: Dallas Fort Worth Hospital Council, COGNOS application, unpublished data; denominator population data from Claritas, Inc.

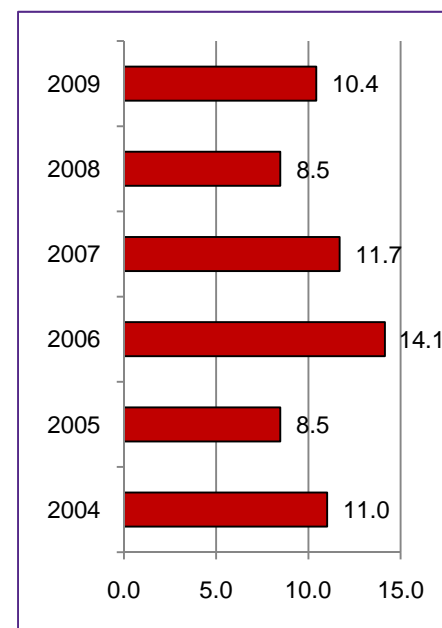
# Risk Factors: Suicide Mortality Rates

*Irving Service Area*

Age-Adjusted Deaths per 100,000



Suicide Mortality Rate, Age-Adjusted Death Rate per 100,000, Irving Service Area



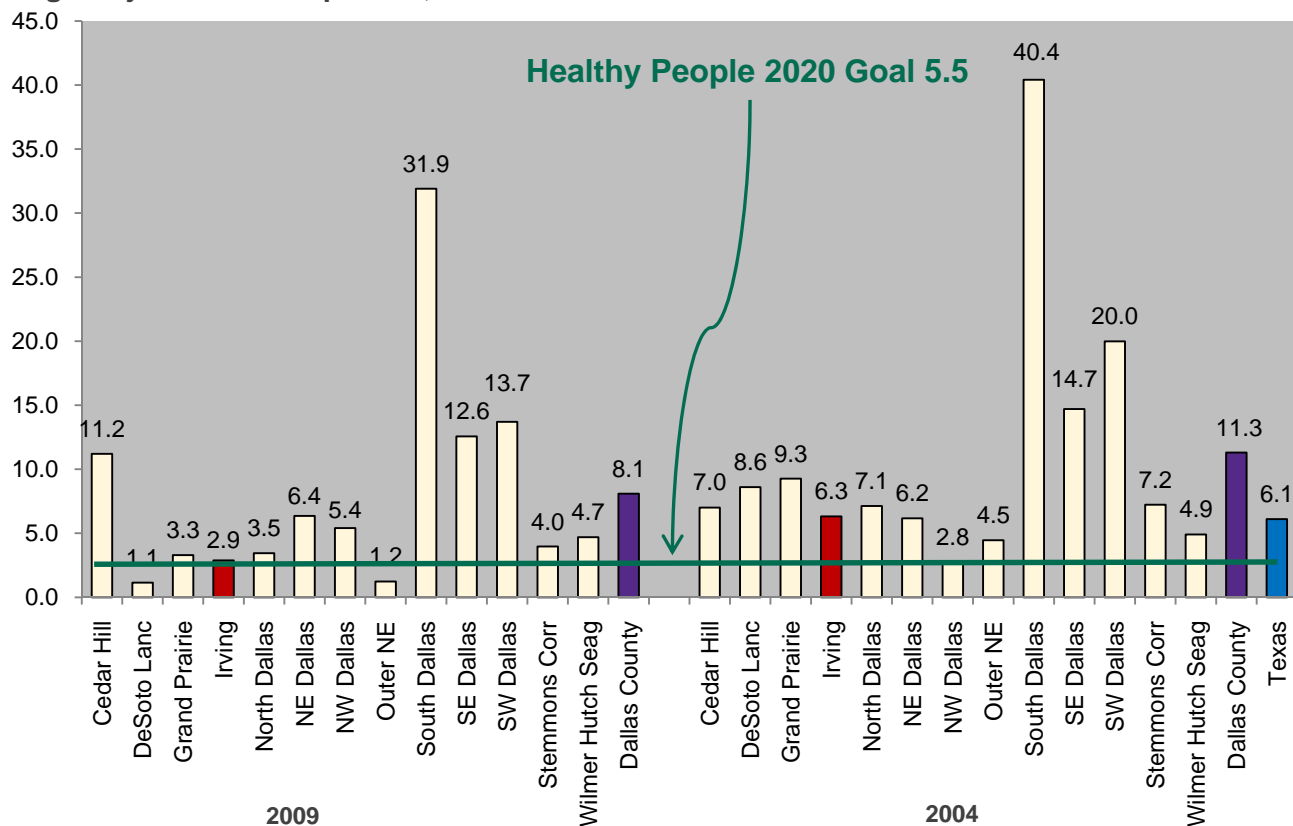
Source: Texas Department of State Health Services, Bureau of Vital Statistics; denominator population data from Claritas, Inc.

# Risk Factors: Homicide

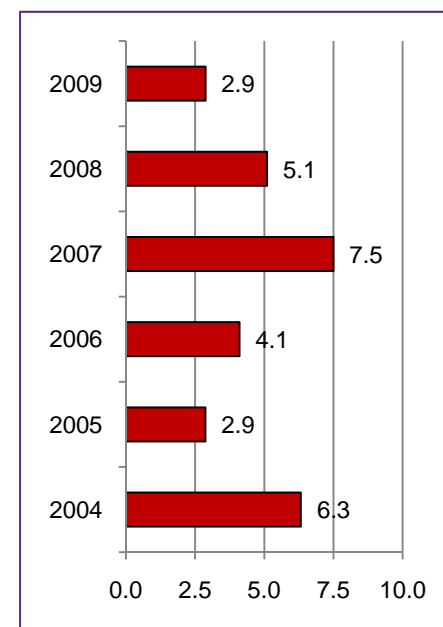
## Mortality Rates

*Irving Service Area*

Age-Adjusted Deaths per 100,000



Homicide Mortality Rate, Age-Adjusted Death Rate per 100,000, Irving Service Area

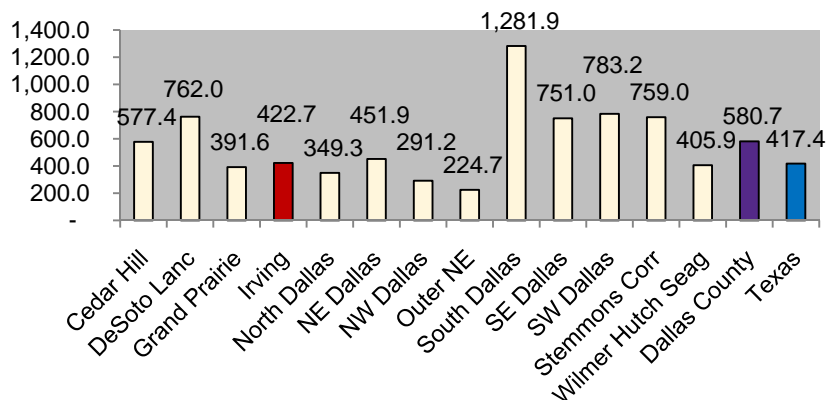


Source: Texas Department of State Health Services, Bureau of Vital Statistics; denominator population data from Claritas, Inc.

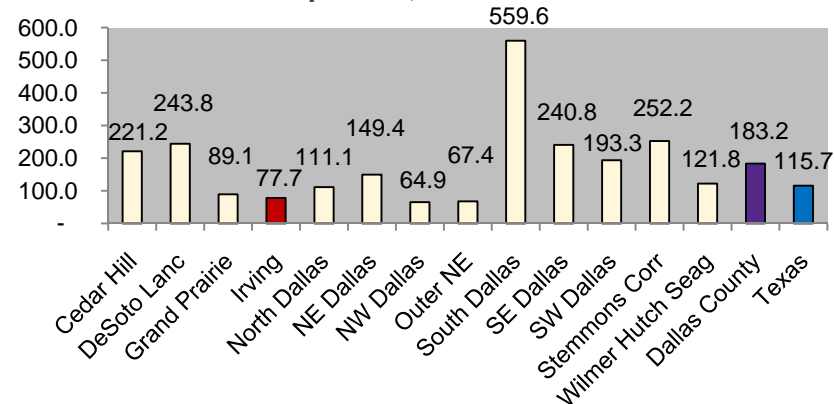
# Risk Factors: High Risk Sexual Behavior, Sexually Transmitted Disease Incidence Rates, 2009

## Irving Service Area

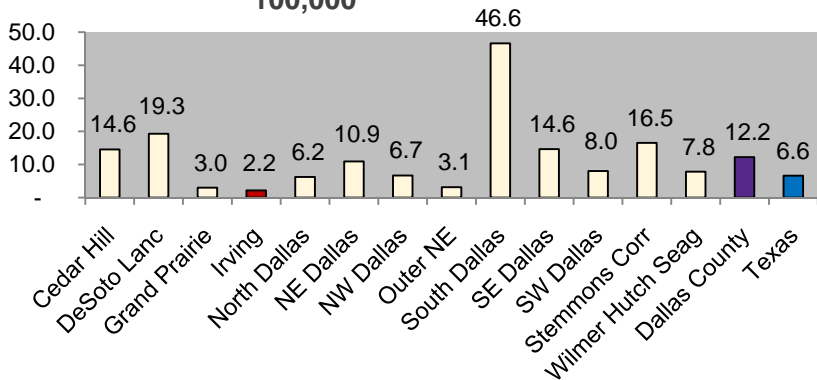
**Chlamydia Incidence per 100,000**



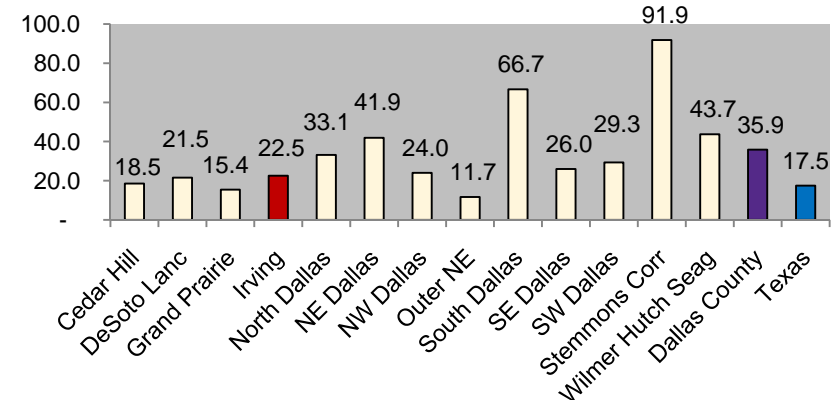
**Gonorrhea Incidence per 100,000**



**Primary & Secondary Syphilis Incidence per 100,000**



**New HIV Incidence per 100,000**

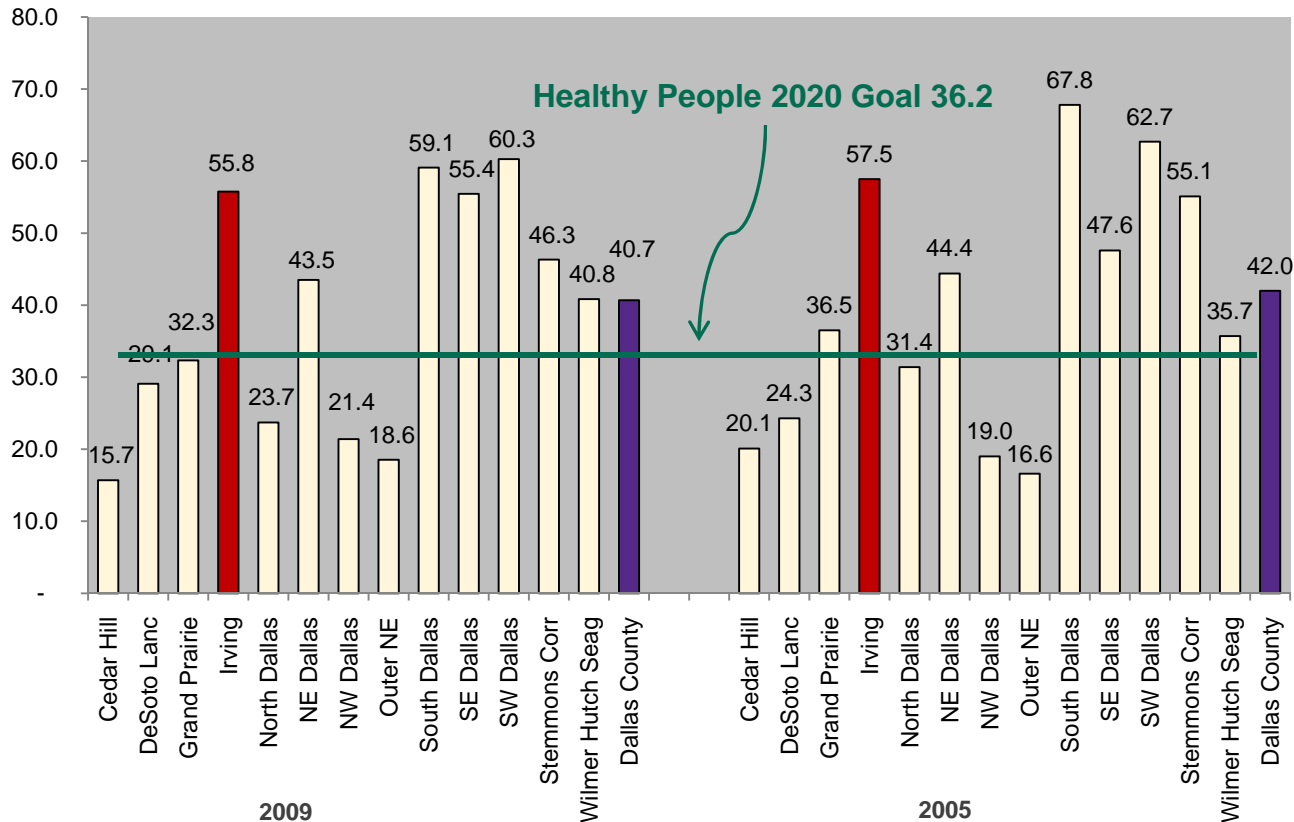




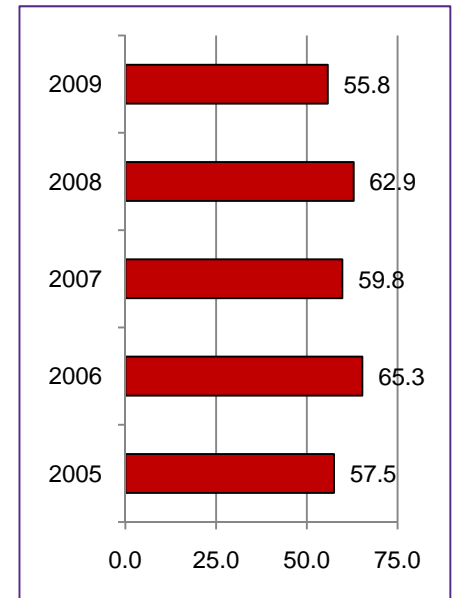
# Risk Factors: High Risk Sexual Behavior, Teen Birth Rates

*Irving Service Area*

Teen Birth Rate



Teen Births, Rate Per 1,000 Girls Ages 15-17, Irving Service Area

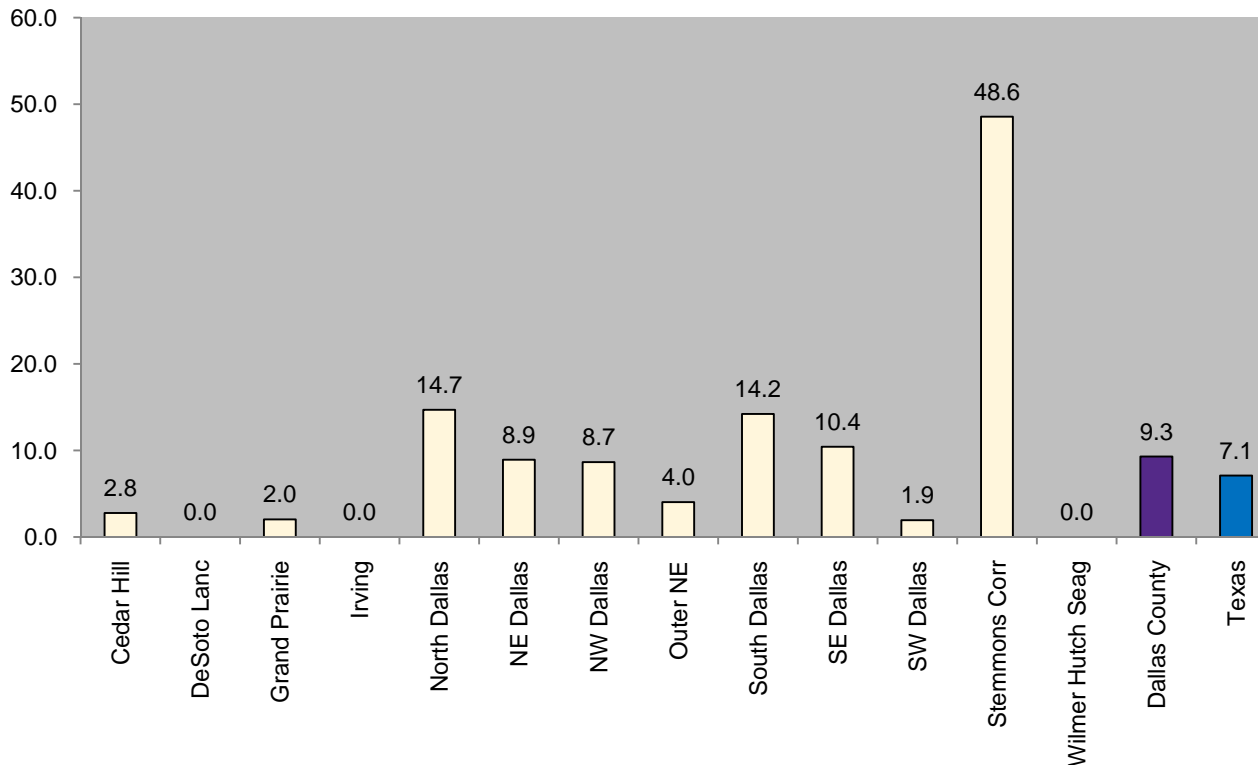


Source: Texas Department of State Health Services, Bureau of Vital Statistics; denominator population data from Claritas, Inc.

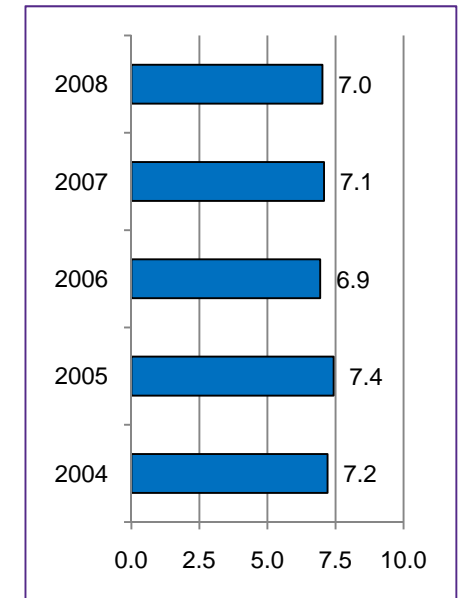
# Risk Factors: Liquor Store Density, 2007

*Irving Service Area*




**Liquor Stores Per 100,000, 2007**

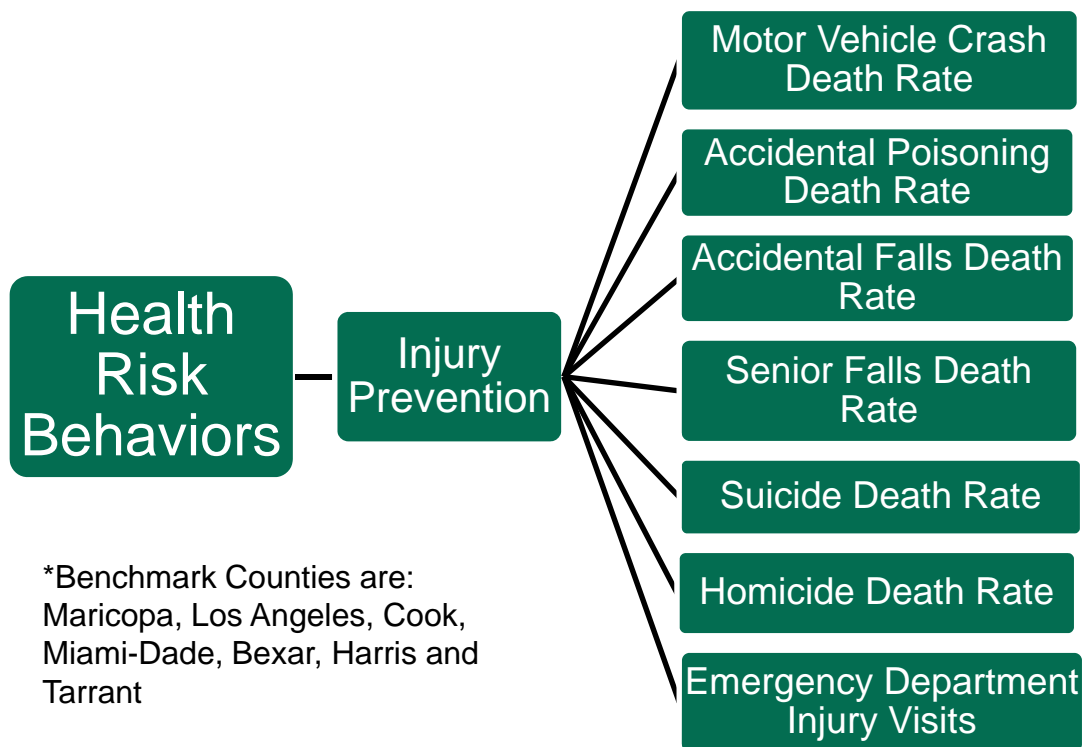























**Liquor Store Density, Stores per 100,000, State of Texas**






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

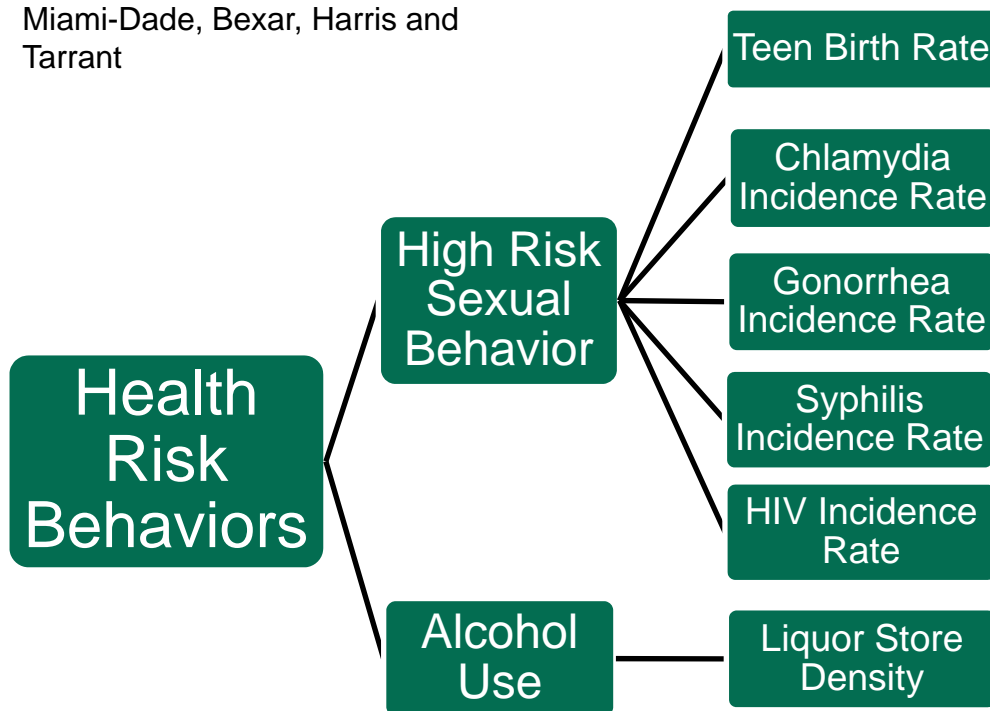
-  – Doing better than the benchmark
-  – Same as/not significantly different from the benchmark
-  – Worse than the benchmark















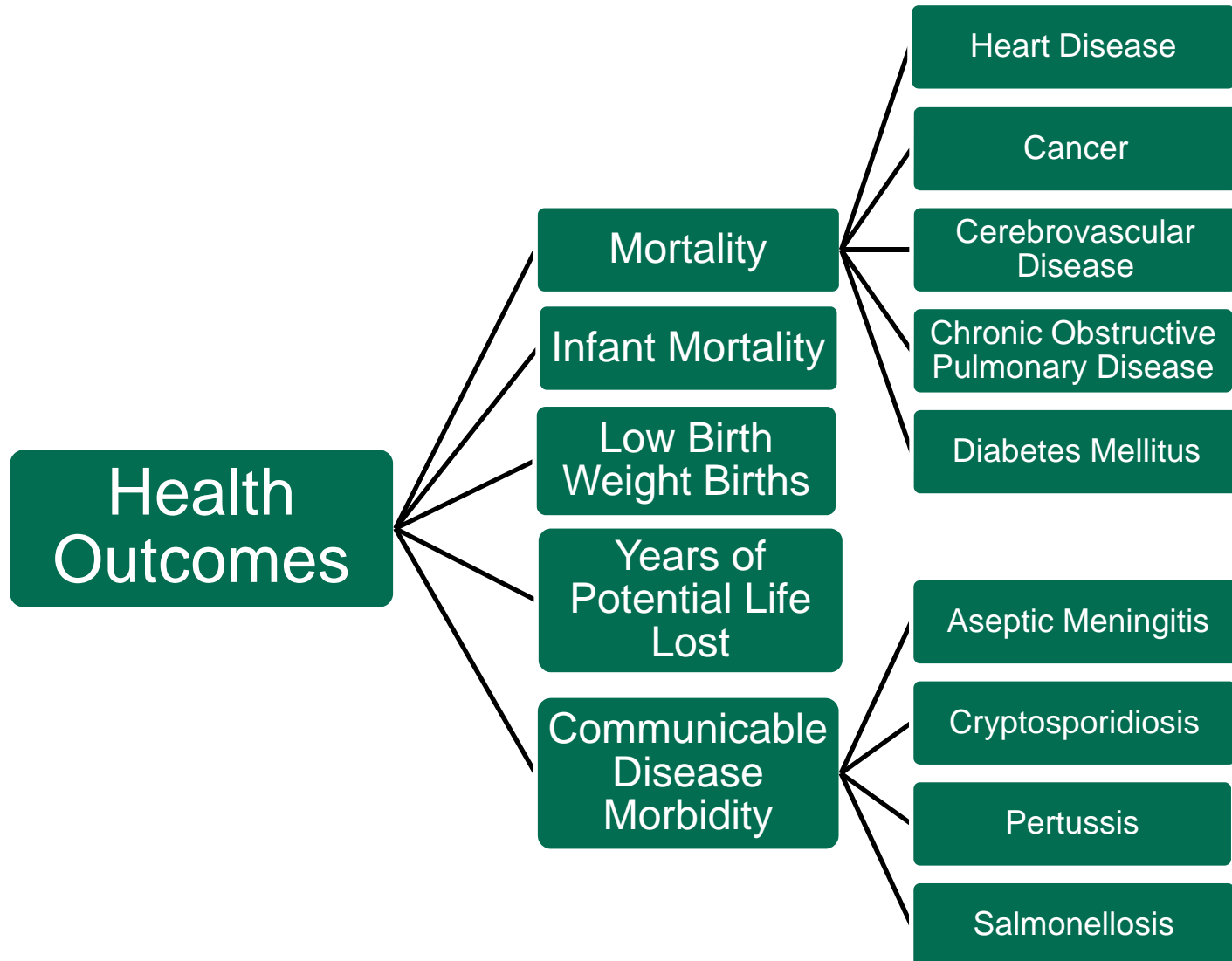
Irving Compared to Healthy People 2020 Goal	Irving Compared to Benchmark Counties* (Quartiles)	Irving Compared to Past Years' Data (CI)
		
		
		
		
		
		
		

-  – 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



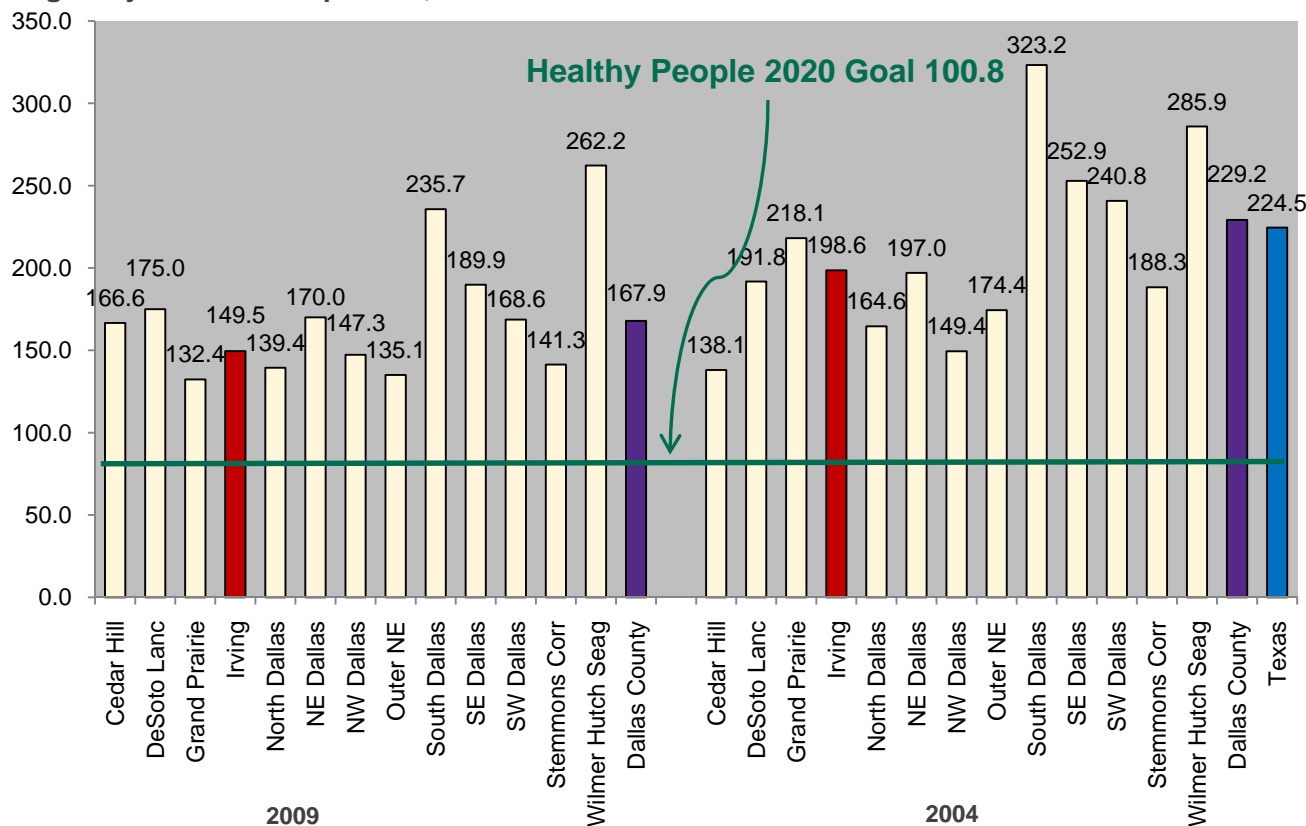
Irving Compared to Healthy People 2020 Goal	Irving Compared to Benchmark Counties* (Quartiles)	Irving Compared to Past Years' Data (CI)
		
N/A		
N/A		
N/A		
N/A		
N/A		N/A



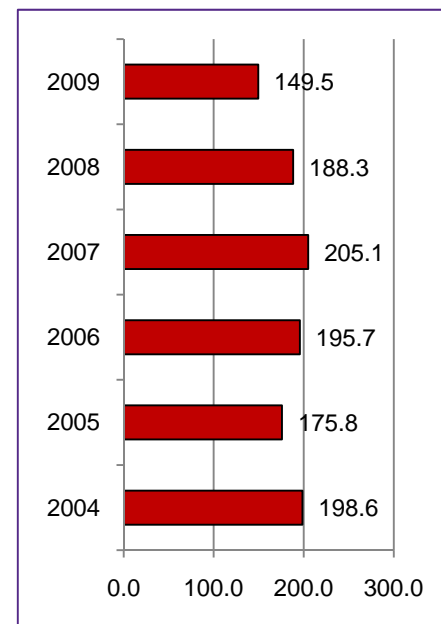
# Health Outcomes: Heart Disease Mortality Rates

## Irving Service Area

Age-Adjusted Deaths per 100,000



Heart Disease Mortality Rate, Age-Adjusted Death Rate per 100,000, Irving Service Area

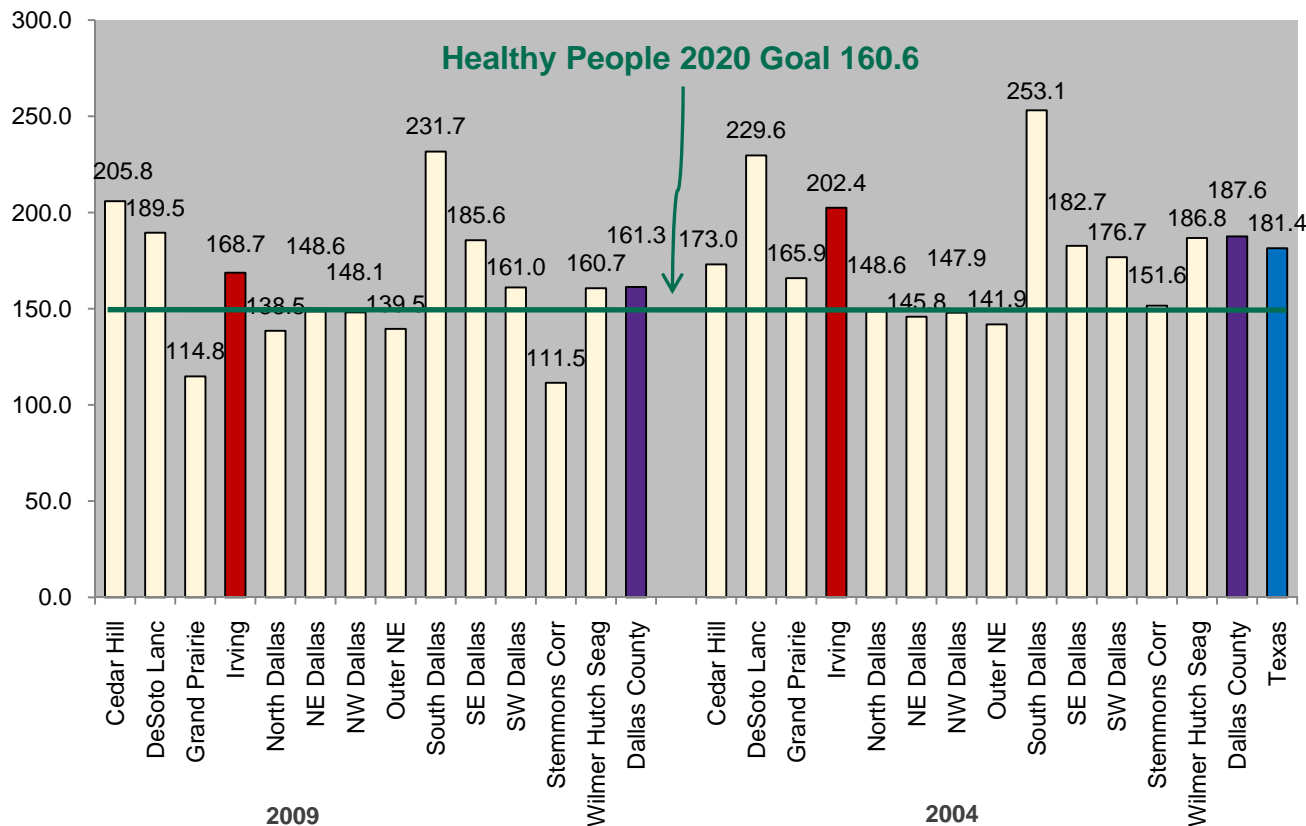


Source: Texas Department of State Health Services, Bureau of Vital Statistics; denominator population data from Claritas, Inc.

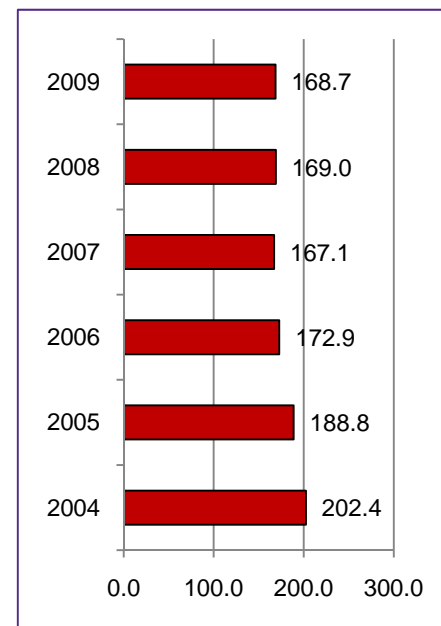
# Health Outcomes: Cancer Mortality Rates

## Irving Service Area

Age-Adjusted Deaths per 100,000



Cancer Mortality Rate, Age-Adjusted Death Rate per 100,000, Irving Service Area

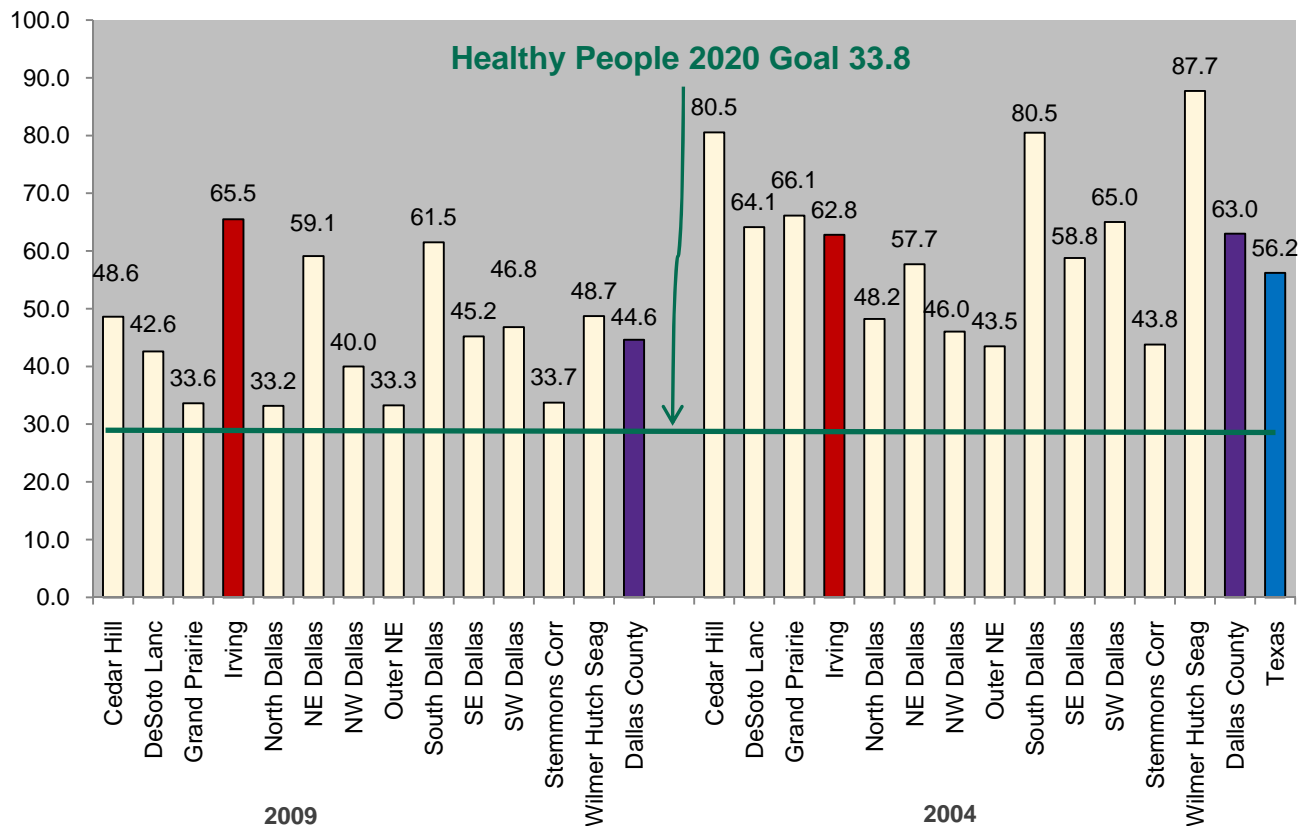


Source: Texas Department of State Health Services, Bureau of Vital Statistics; denominator population data from Claritas, Inc.

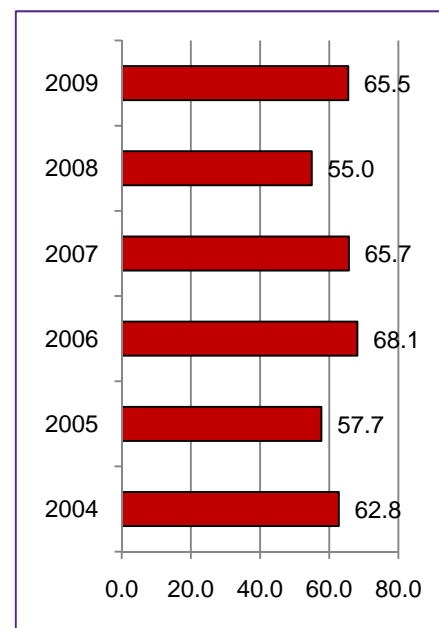
# Health Outcomes: Cerebrovascular Disease Mortality Rates

*Irving Service Area*

Age-Adjusted Deaths per 100,000



Cerebrovascular Disease Mortality Rate, Age-Adjusted Death Rate per 100,000, Irving Service Area

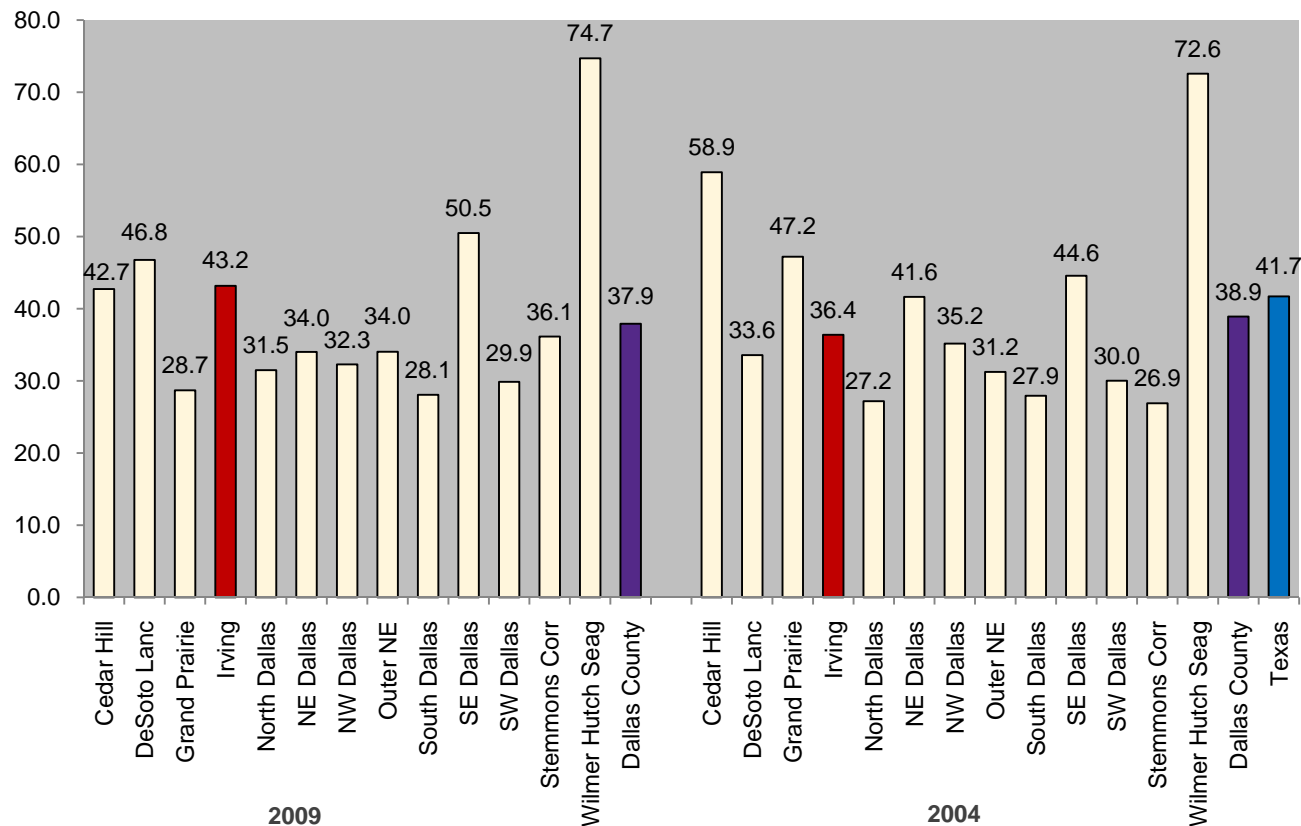


Source: Texas Department of State Health Services, Bureau of Vital Statistics; denominator population data from Claritas, Inc.

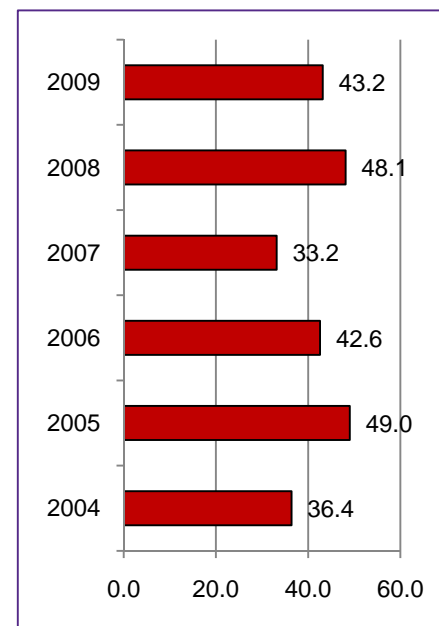
# Health Outcomes: Chronic Obstructive Pulmonary Disease Mortality Rates

*Irving Service Area*

Age-Adjusted Deaths per 100,000



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



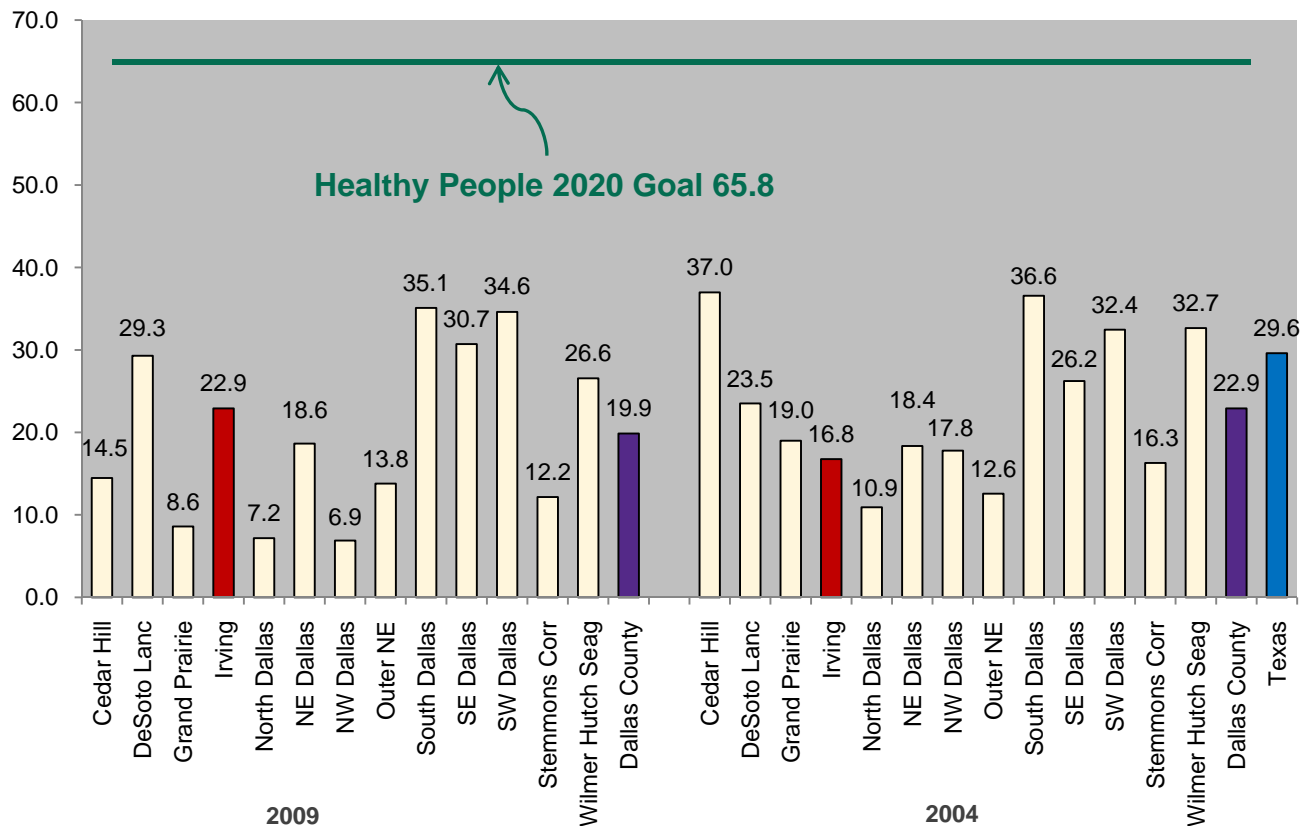
NOTE: No Healthy People 2020 goal matches this metric.

# Health Outcomes: Diabetes

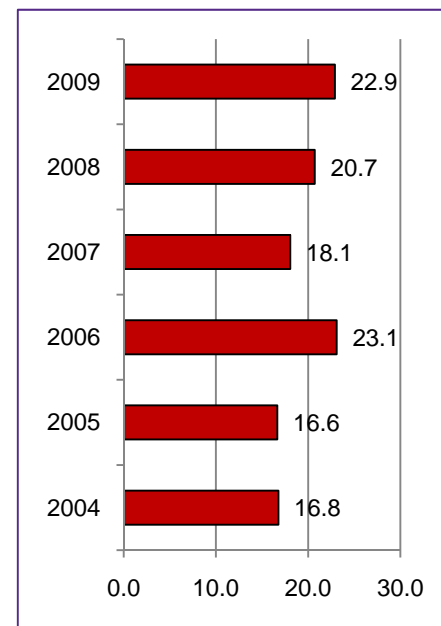
## Mortality Rates

*Irving Service Area*

Age-Adjusted Deaths per 100,000



Diabetes Mellitus Mortality Rate, Age-Adjusted Death Rate per 100,000, Irving Service Area



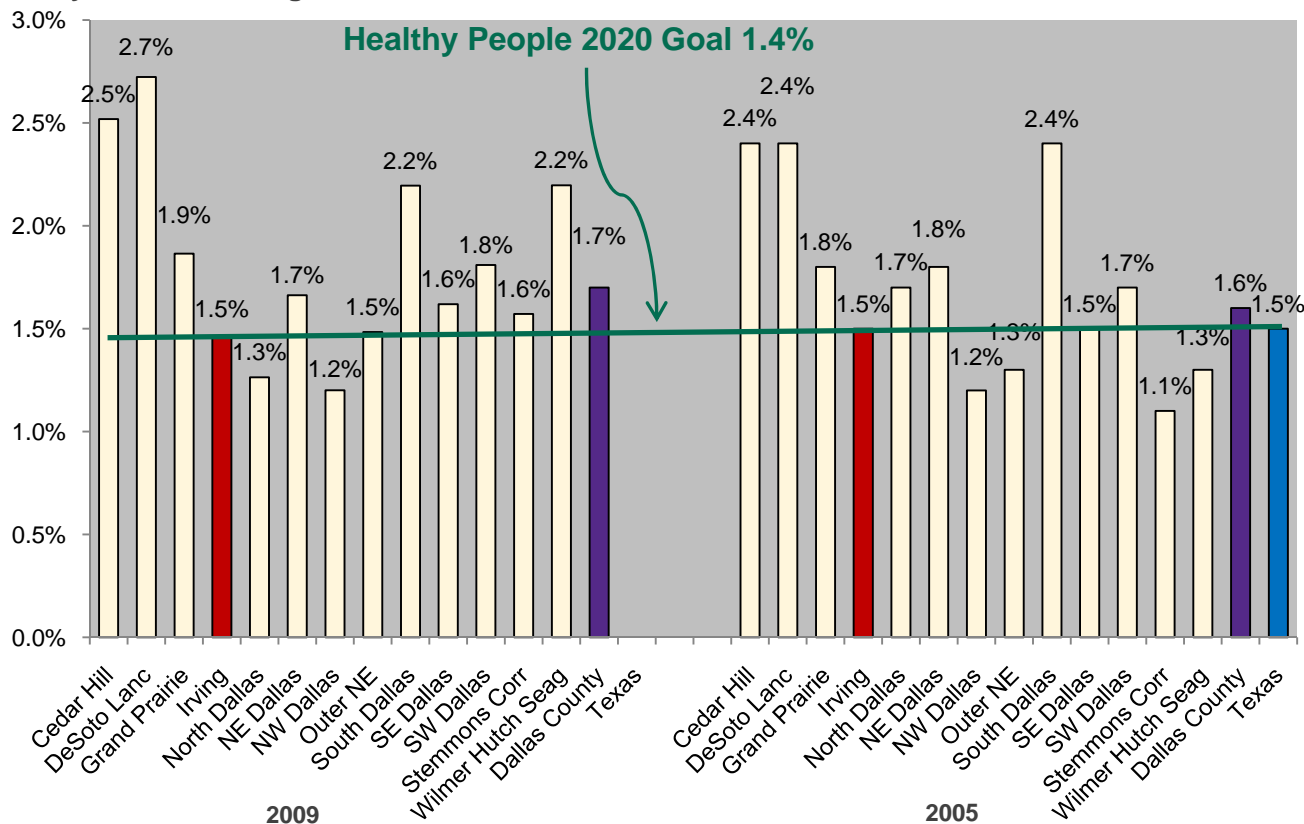
Source: Texas Department of State Health Services, Bureau of Vital Statistics; denominator population data from Claritas, Inc.



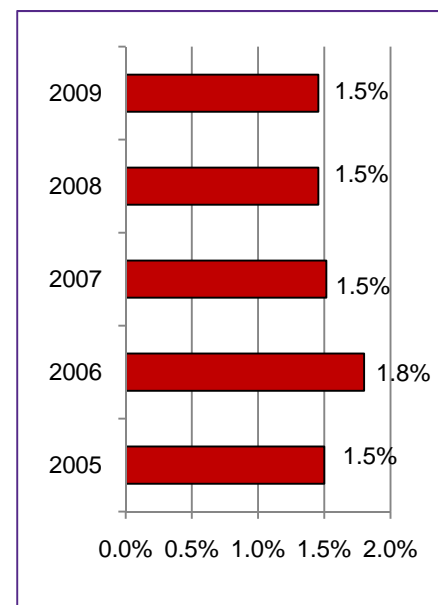
# Health Outcomes: Birth Outcomes, Rate of Very Low Birth Weight Births

## Irving Service Area

Very Low Birth Weight Rate



Very Low Birth Weight Rate, % of Births Below 1500 Grams at Birth, Irving Service Area

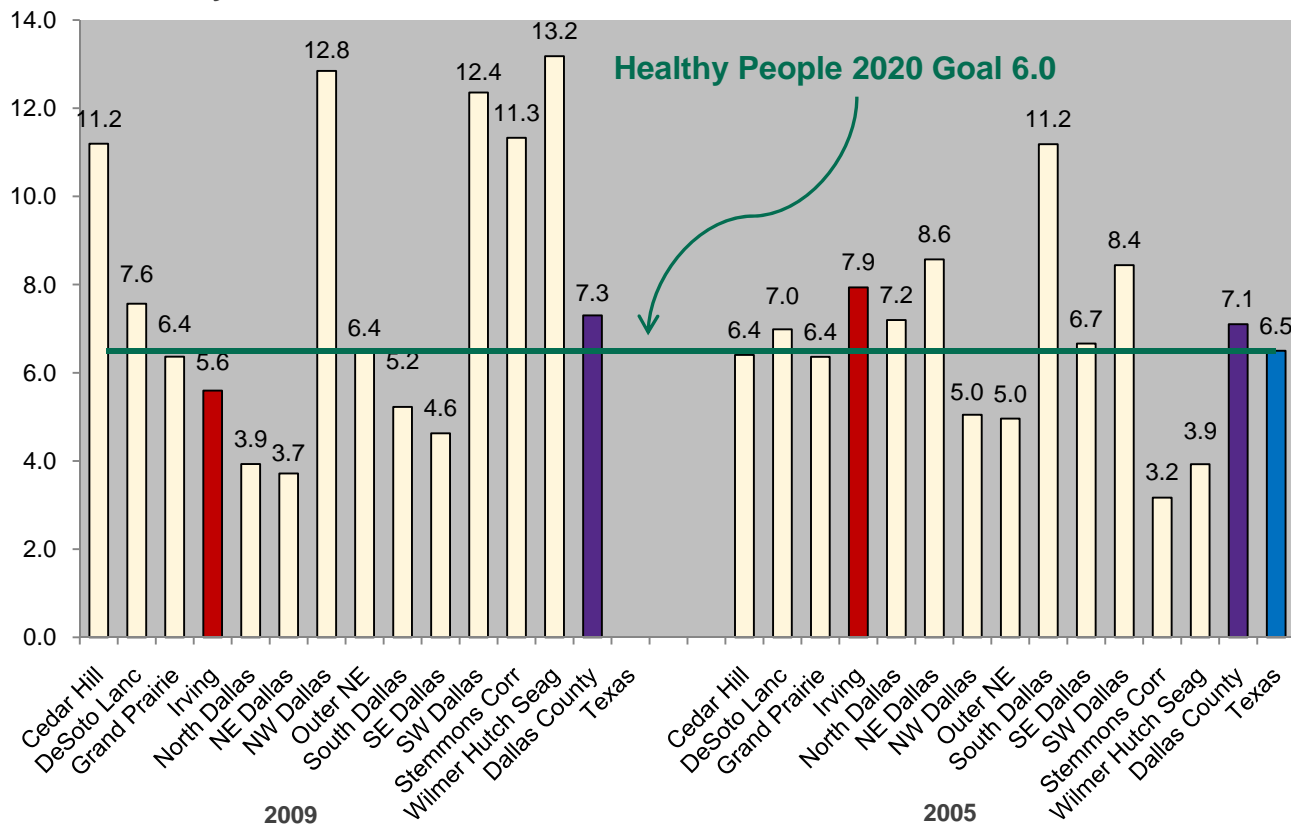


Source: Texas Department of State Health Services, Bureau of Vital Statistics;  
denominator population data from Claritas, Inc.

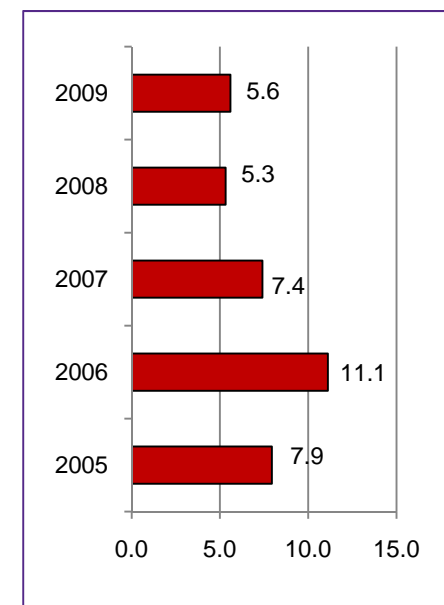
# Health Outcomes: Birth Outcomes, Infant Mortality Rate

*Irving Service Area*

Infant Mortality Rate



Infant Mortality Rate, Deaths  
per 1,000 Live Births, Irving  
Service Area

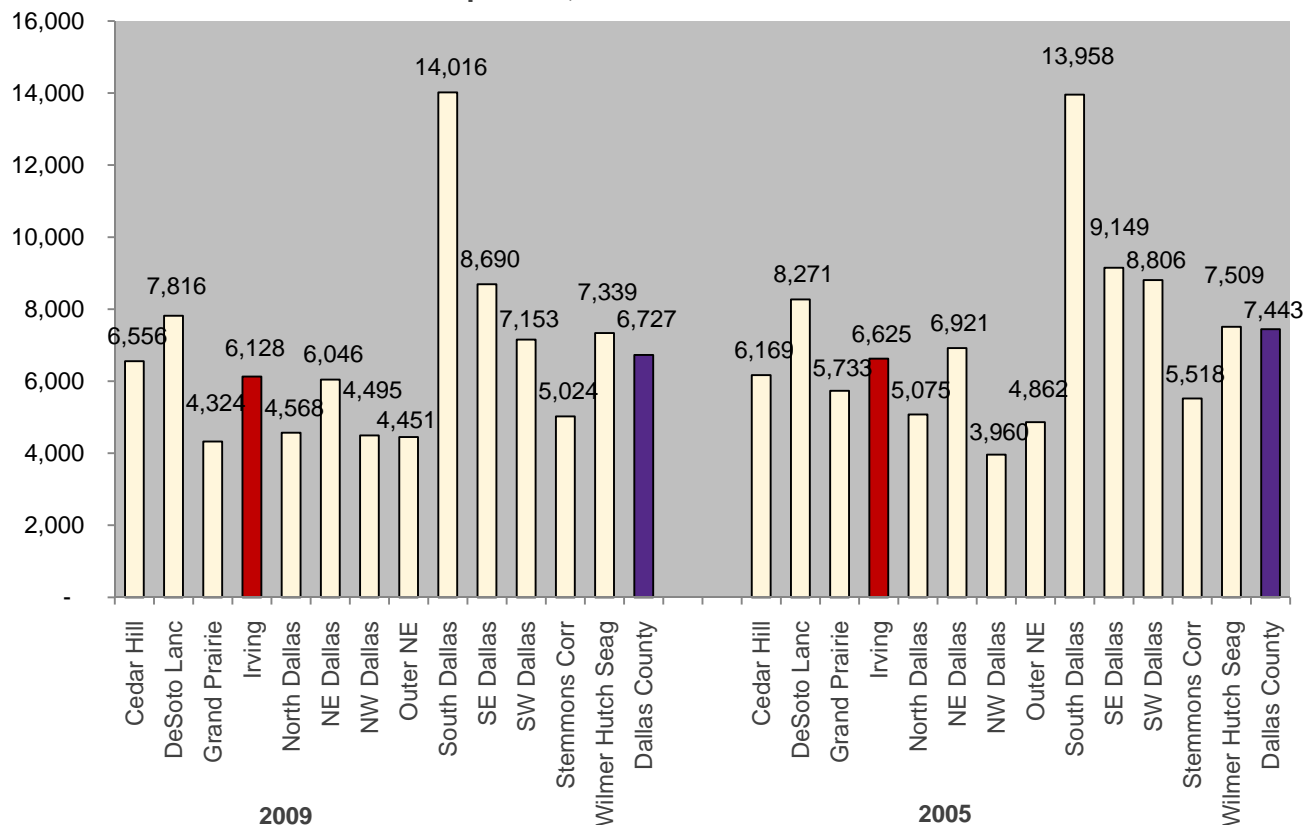


Source: Texas Department of State Health Services, Bureau of Vital Statistics;  
Denominator population data from Claritas, Inc.

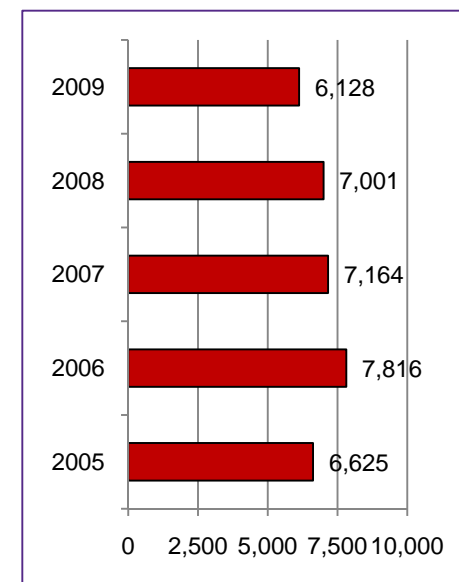
# Health Outcomes: Years of Potential Life Lost, All Causes

## *Irving Service Area*

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



Years of Potential Life Lost Rate\*, per 100,000, Irving Service Area



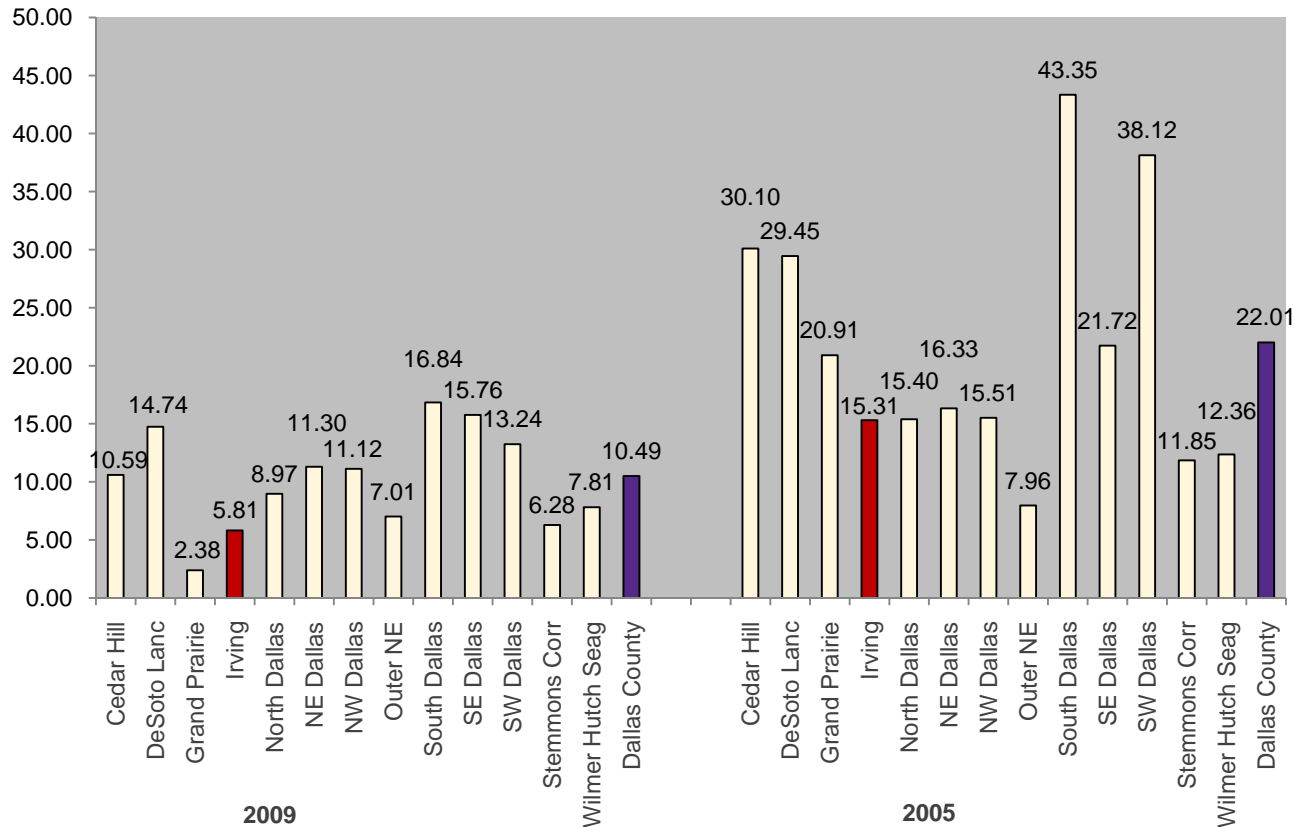
\*Years of Potential Life Lost Rate is defined as the rate of deaths under age 75 per 100,000 population under age 75.



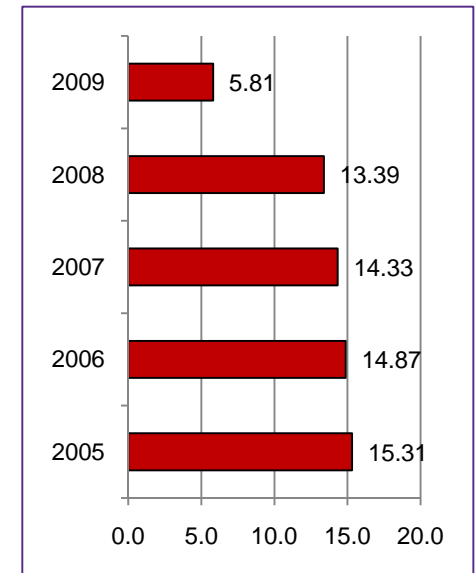
# Health Outcomes: Reportable Communicable Disease Rates

*Irving Service Area*

**Aseptic Meningitis Incidence, per 100,000**



**Aseptic Meningitis Incidence  
Rate, per 100,000, Irving  
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/departments/hhservices/services/communicable/documents/ReportableConditions2003-07Annual.pdf>;

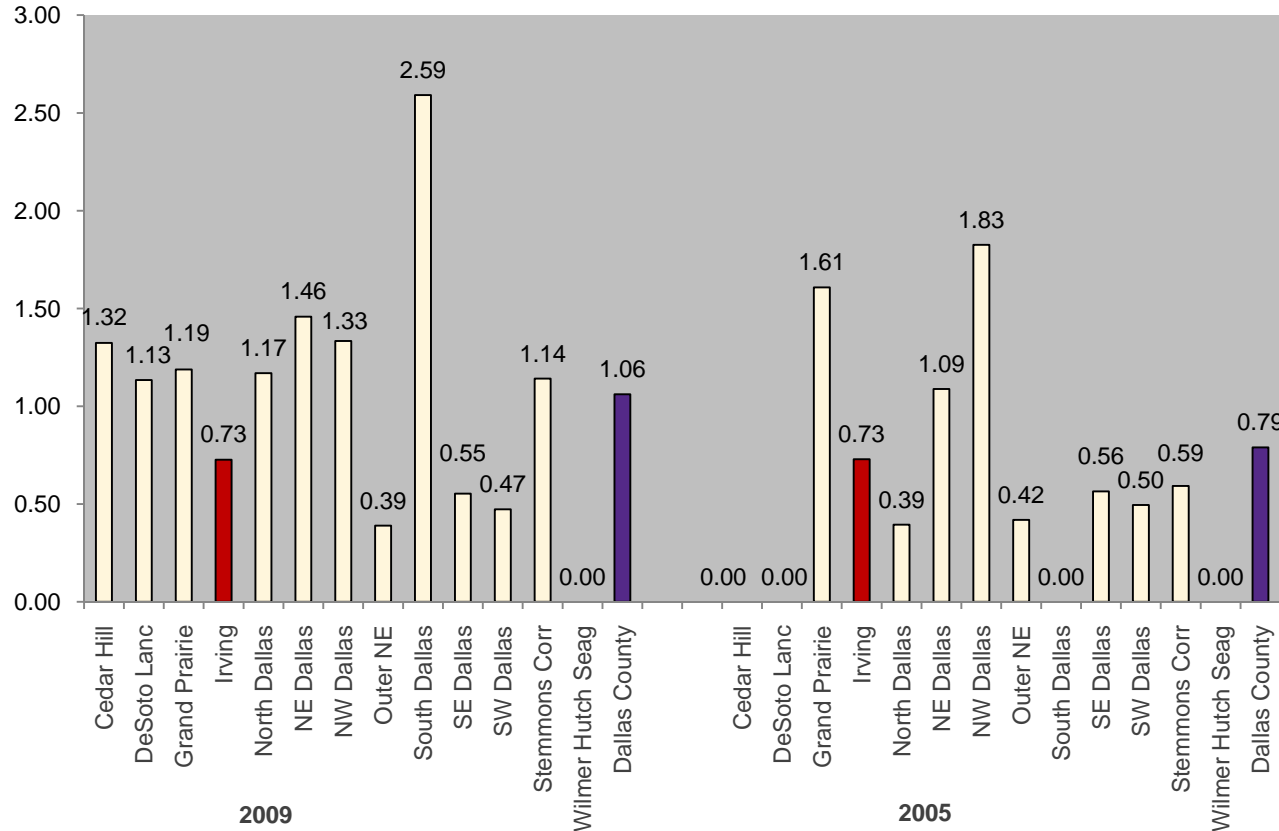
2005 Dallas County denominator population data from American Community Survey.



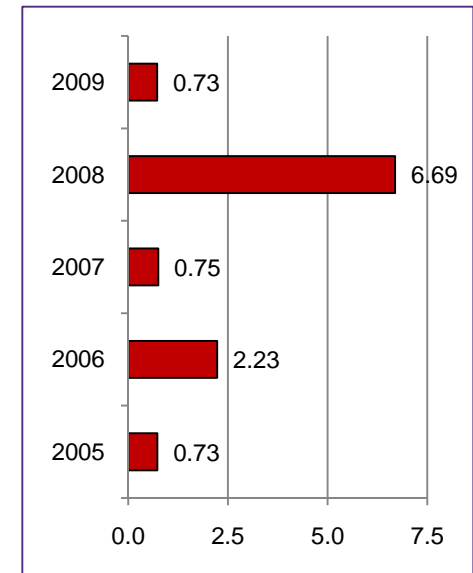
# Health Outcomes: Reportable Communicable Disease Rates

*Irving Service Area*

**Cryptosporidiosis Incidence, per 100,000**



**Cryptosporidiosis Incidence  
Rate, per 100,000, Irving  
Service Area**



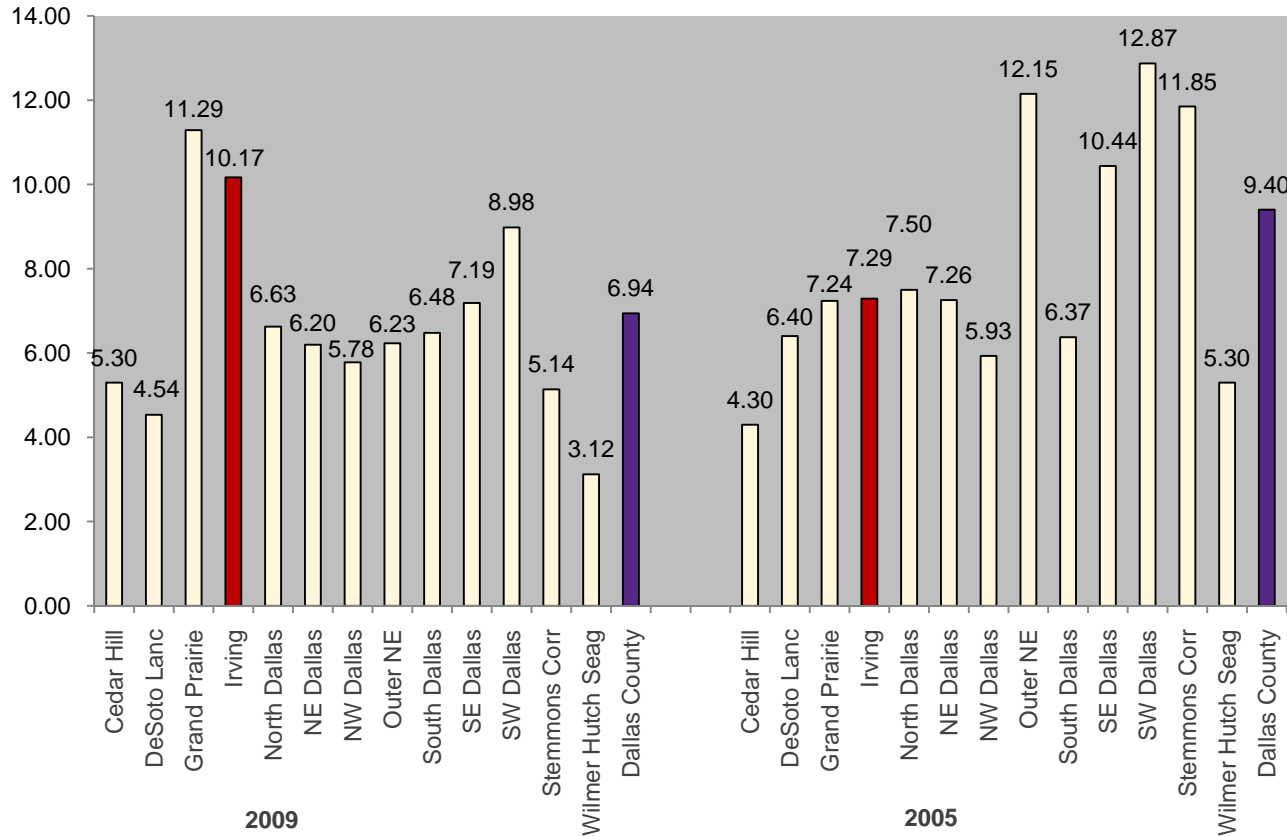
Source: Texas Department of State Health Services, Infectious Disease Control Unit, unpublished data; denominator population data from Claritas, Inc.; 2005 Dallas County data from Dallas County Health and Human Services web site:  
<http://www.dallascounty.org/departments/hhservices/services/communicable/documents/ReportableConditions2003-07Annual.pdf>;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



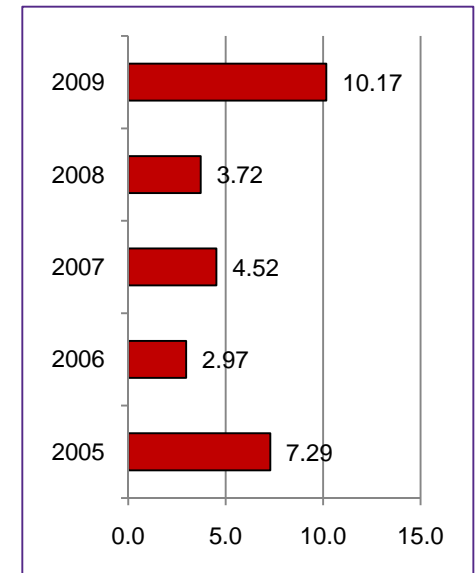
# Health Outcomes: Reportable Communicable Disease Rates

## *Irving Service Area*

**Pertussis Incidence, per 100,000**



**Pertussis Incidence Rate, per 100,000, Irving Service Area**



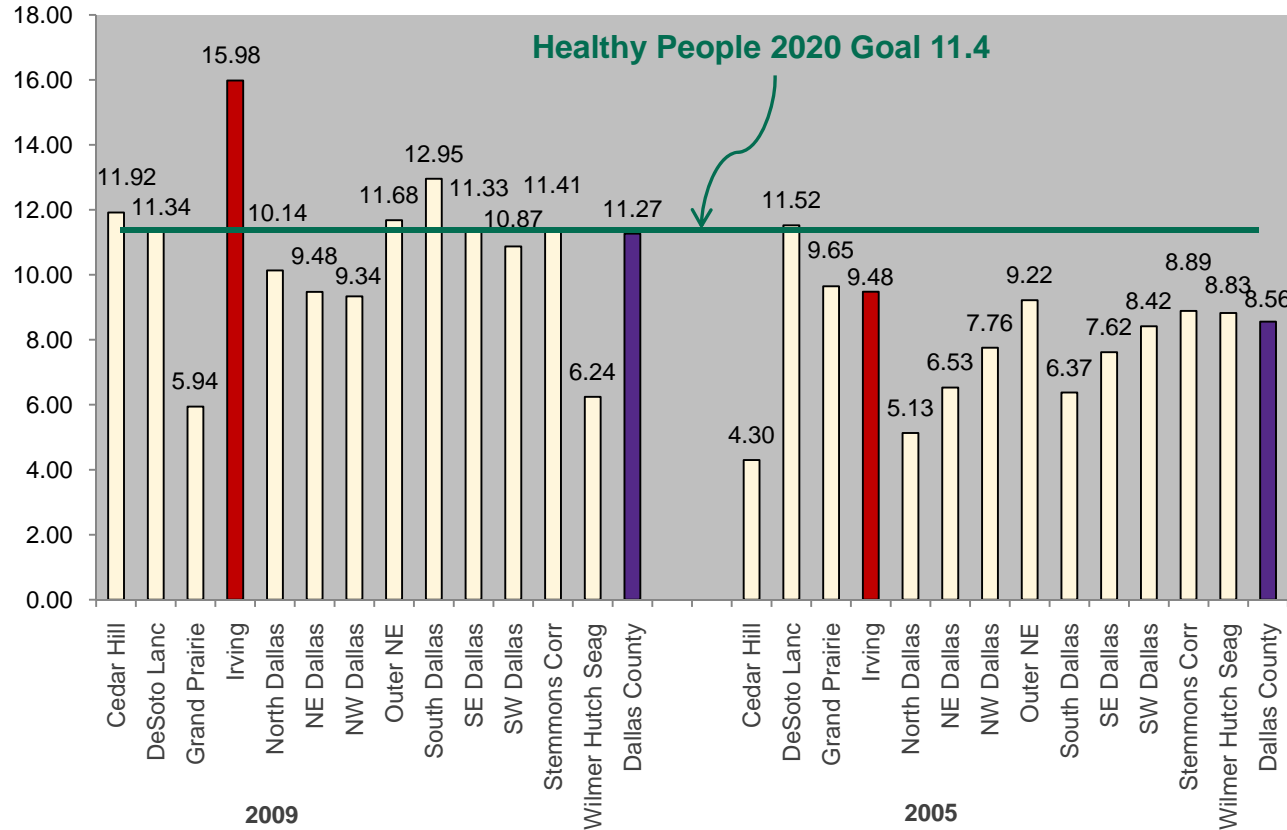
Source: Texas Department of State Health Services, Infectious Disease Control Unit, unpublished data; denominator population data from Claritas, Inc.; 2005 Dallas County data from Dallas County Health and Human Services web site:  
<http://www.dallascounty.org/departments/hhservices/services/communicable/documents/ReportableConditions2003-07Annual.pdf>;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



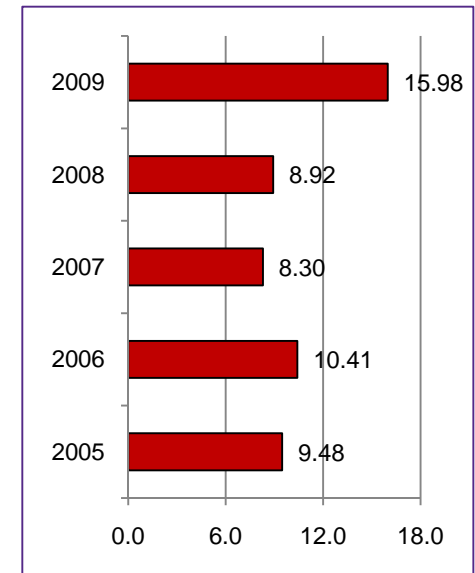
# Health Outcomes: Reportable Communicable Disease Rates

## Irving Service Area




Salmonellosis Incidence, per 100,000

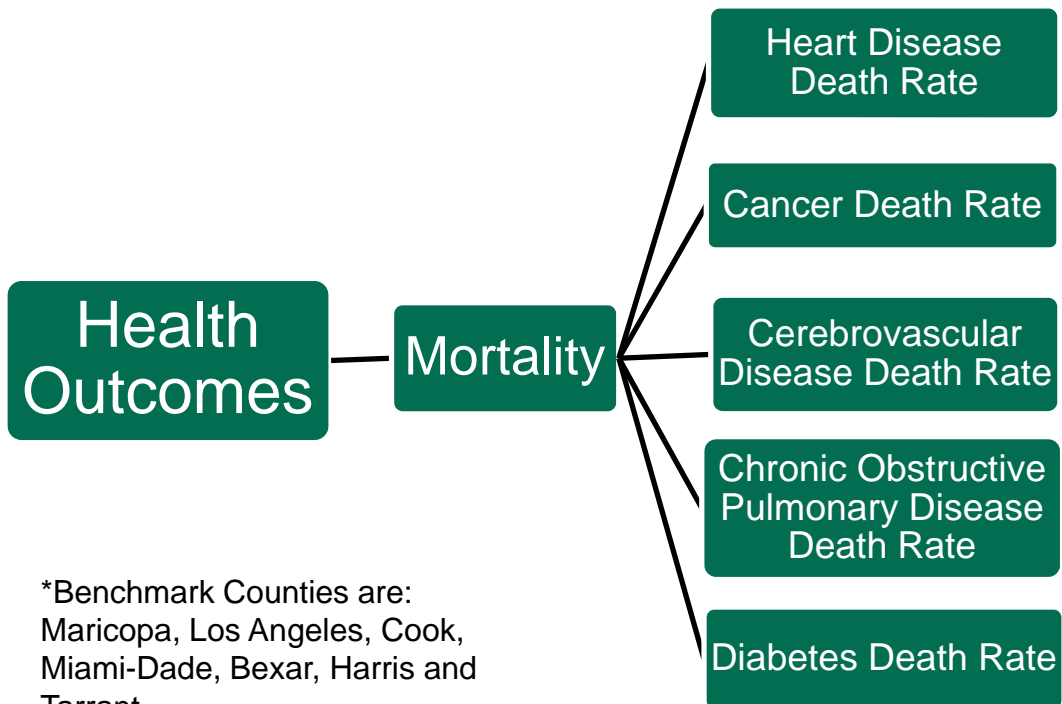















Salmonellosis Incidence Rate,  
per 100,000, Irving Service  
Area






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/departments/hhservices/services/communicable/documents/ReportableConditions2003-07Annual.pdf>;  
2005 Dallas County denominator population data from American Community Survey.

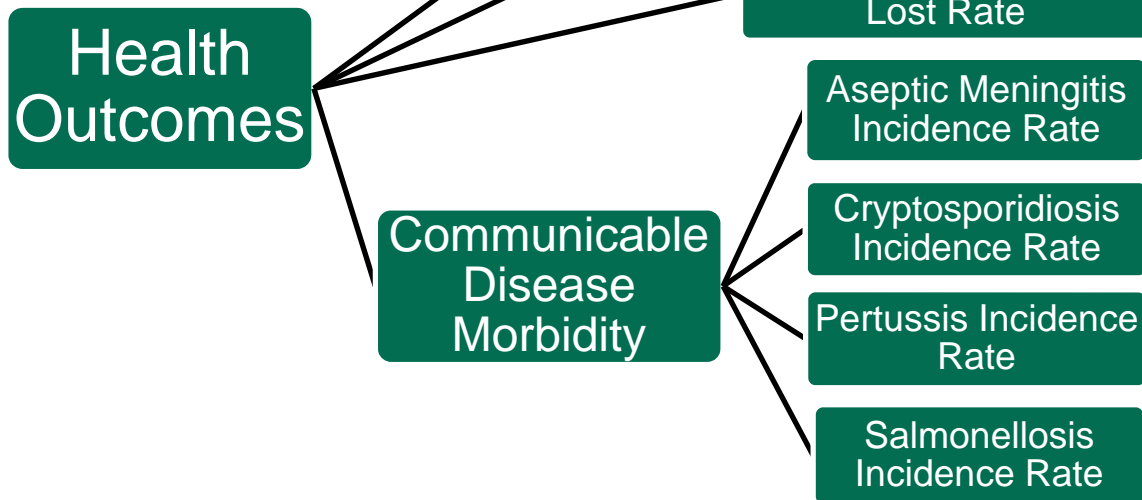
-  – Doing better than the benchmark
-  – Same as/not significantly different from the benchmark
-  – Worse than the benchmark
















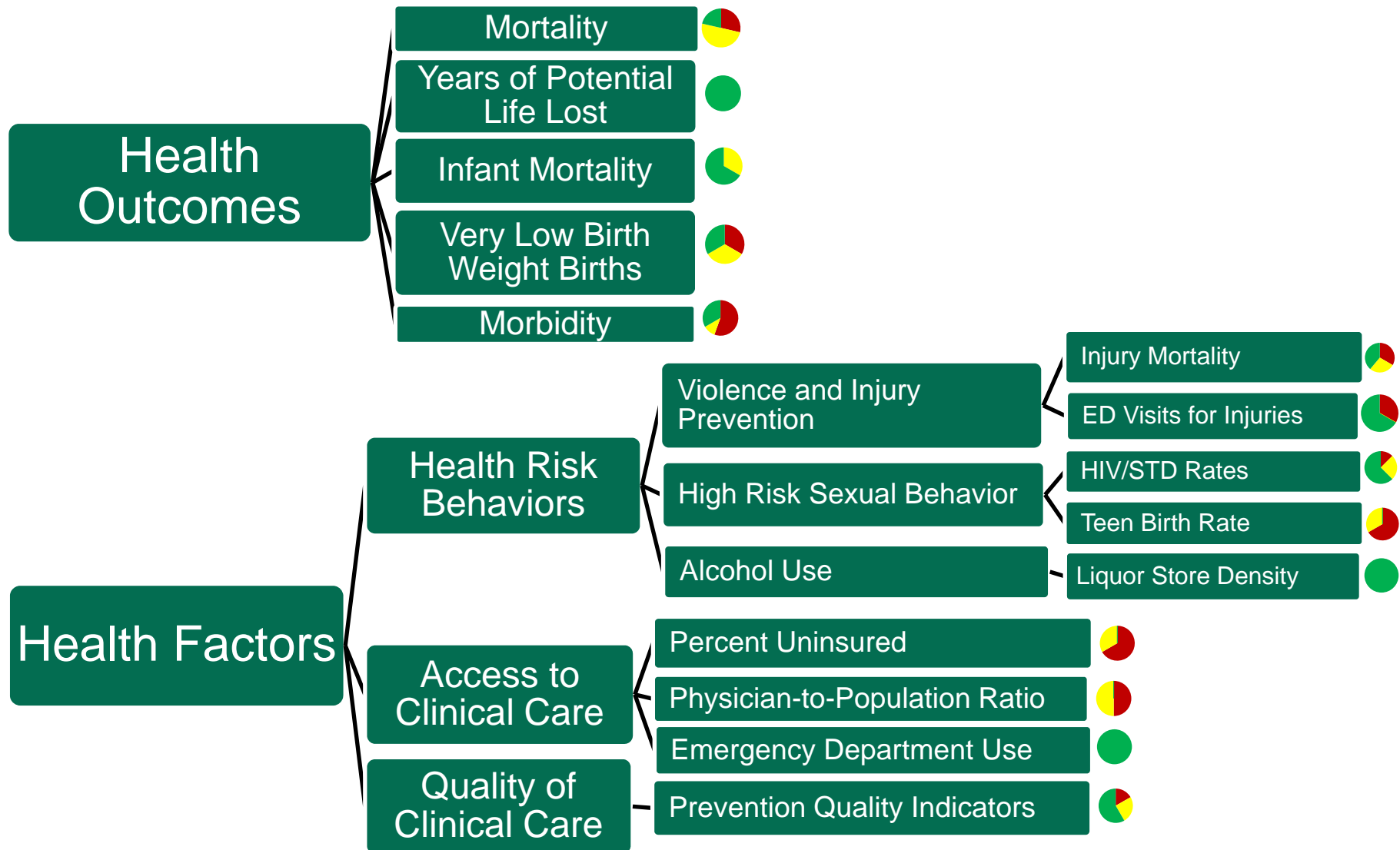
Irving Compared to Healthy People 2020 Goal	Irving Compared to Benchmark Counties* (Quartiles)	Irving Compared to Past Years' Data (CI)
		
		
		
N/A		
		

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

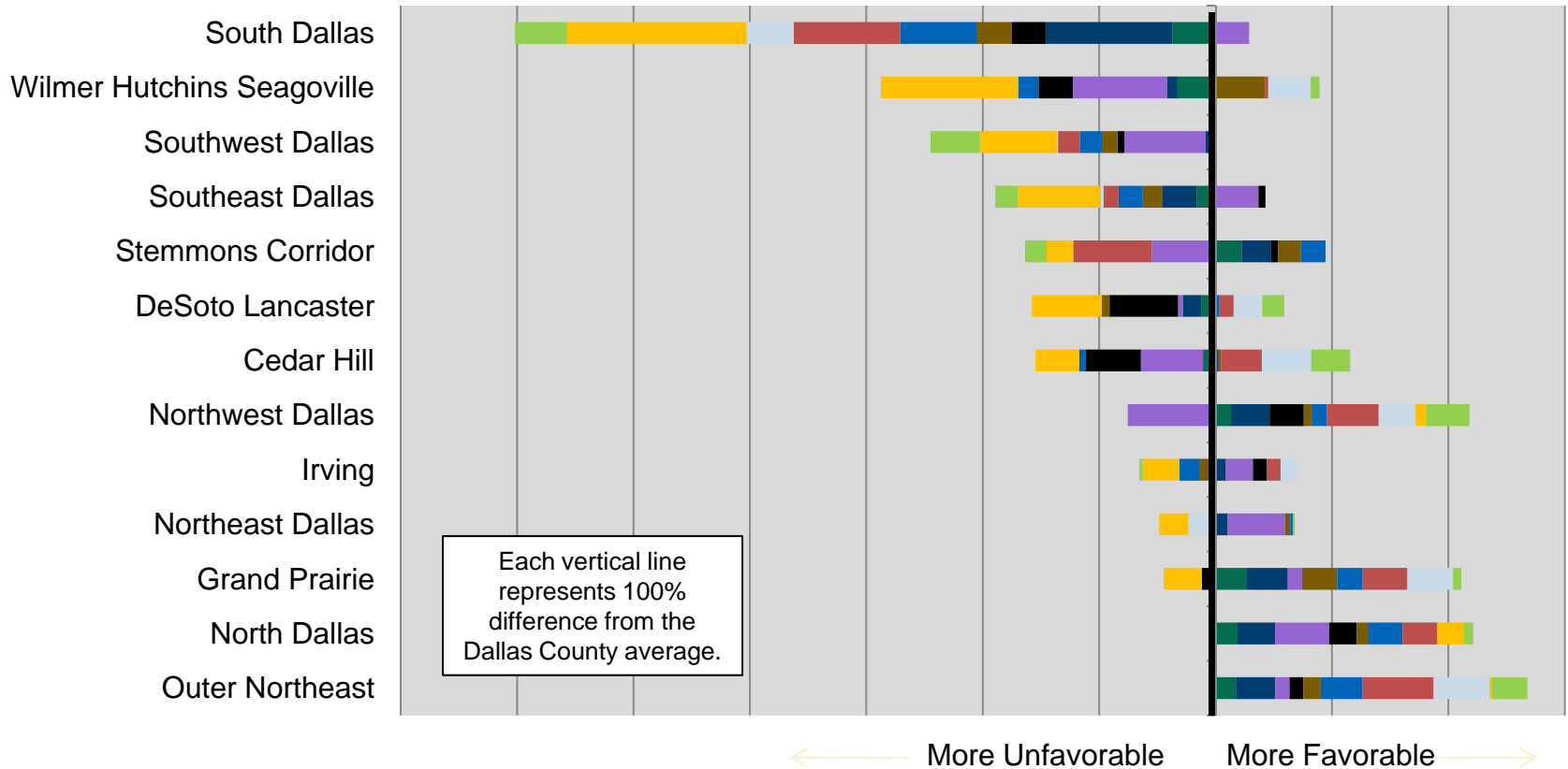
\*Benchmark Counties are:  
Maricopa, Los Angeles, Cook,  
Miami-Dade, Bexar, Harris and  
Tarrant



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



# Parkland 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.
  - 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. 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 100,000), 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.**



- **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.