## Community Health

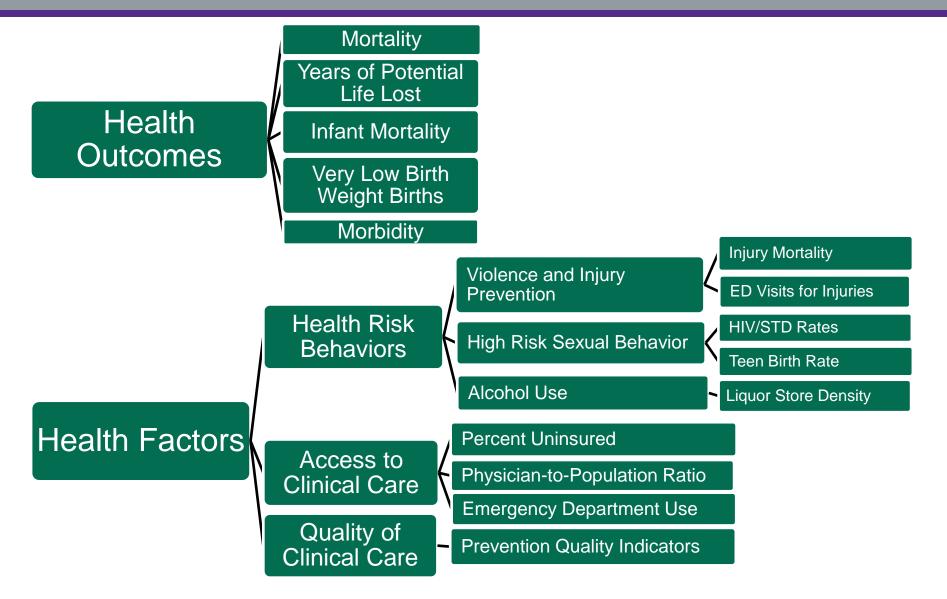
## Assessment







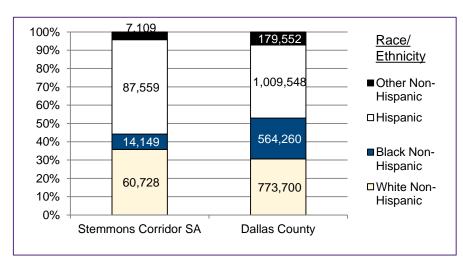
# Organizational Model For the Community Health Dashboard

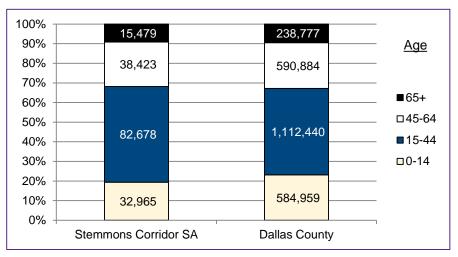


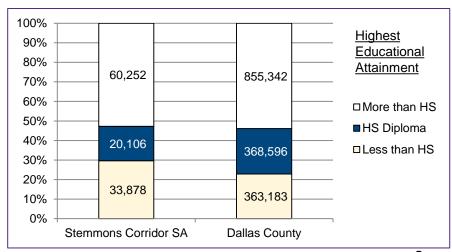


### **Demographic Profile**

- The population of the Stemmons Corridor Service Area has a lower percentage of children under 15 than the county population (19.4% vs. 23.2%).
- The largest race/ethnic group in the Service Area population is Hispanics, comprising 51.6% of the population.
- Stemmons Corridor has a somewhat larger proportion of people without a high school diploma or more (29.7%) compared with Dallas County as a whole (22.9%).





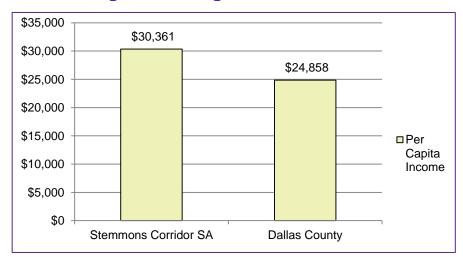


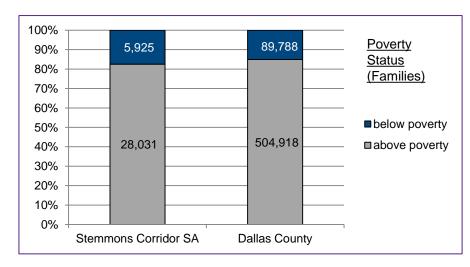


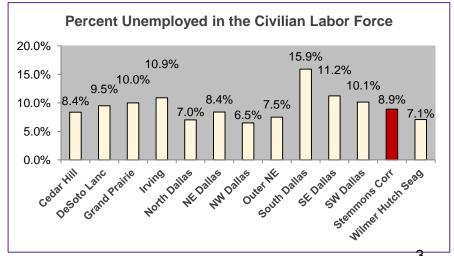
### **Demographic Profile**

#### Stemmons Corridor Service Area

- The Stemmons Corridor Service Area has a higher percentage of households in poverty (17.9%) than the Dallas County-wide rate (15.1%), the fourth highest poverty rate of the 13 service areas.
- The Service Area's per capita income was the third highest of the 13 service areas. This suggests a wide income disparity within the service area.
- The percent unemployed for this Service Area is the 7<sup>nd</sup> highest among the 13 Service Areas.

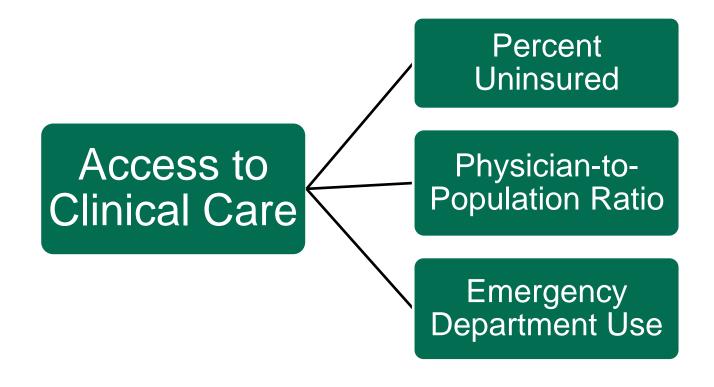






Source: Nielson/Claritas Pop-Facts mid-2013 version



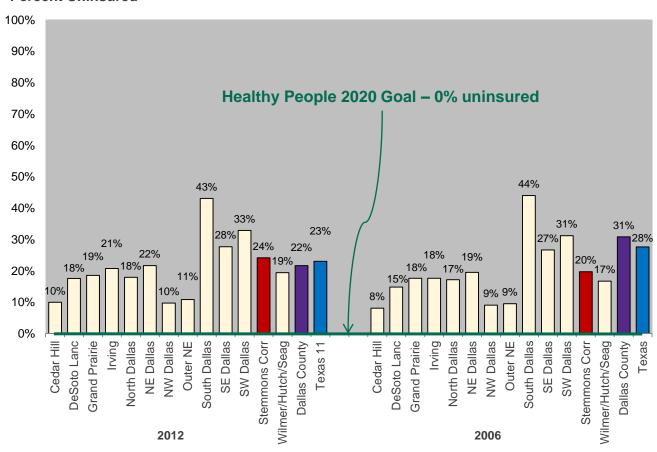




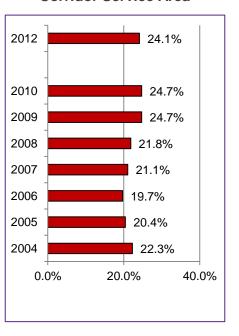
# Access to Healthcare: Percent Without Healthcare Insurance

Stemmons Corridor Service Area

#### **Percent Uninsured**



#### Percent Without Health Insurance, Stemmons Corridor Service Area



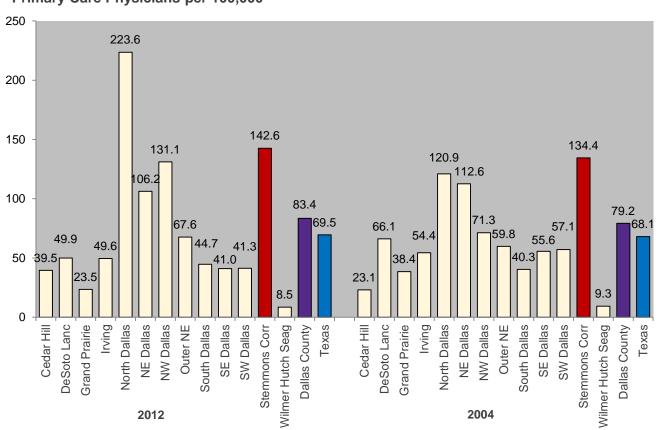
Source: 2012 Truven Analytics, Inc. Denominator population data from Claritas, Inc.; Texas rate from US Census Bureau's American Community Survey 2011; 2006 Solucient, Inc.



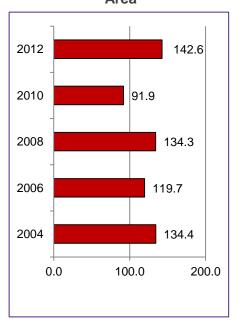
## Access to Healthcare: Primary Care Physician-to-Population Ratio

Stemmons Corridor Service Area

#### Primary Care Physicians per 100,000



Primary Care Physician-to-Population Ratio, per 100,000, Stemmons Corridor 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.

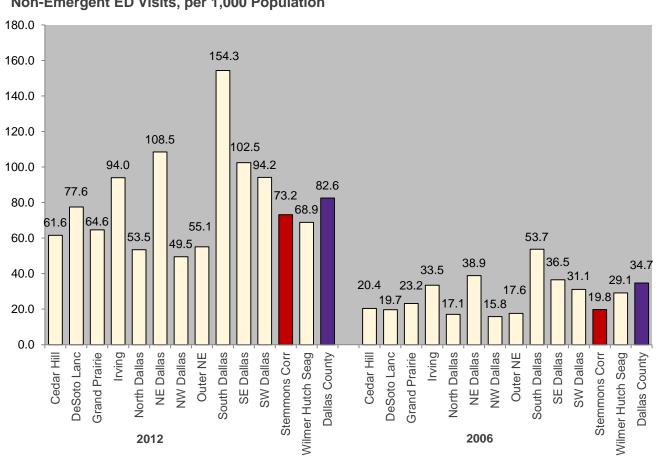
County and State source is Texas Bureau of Primary Care.



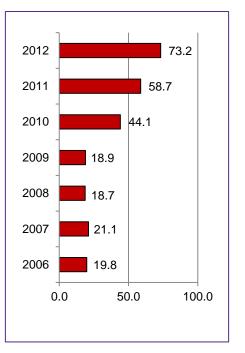
## Access to Healthcare: Non-**Emergent ED Utilization**

Stemmons Corridor Service Area

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



#### Rate of Non-Emergent ED Visits, per 1,000, Stemmons **Corridor Service Area**





### **Access to Care**

**Stemmons** 

**Stemmons** 



- Doing better than the benchmark



Tarrant

- Same as/not significantly different from the benchmark

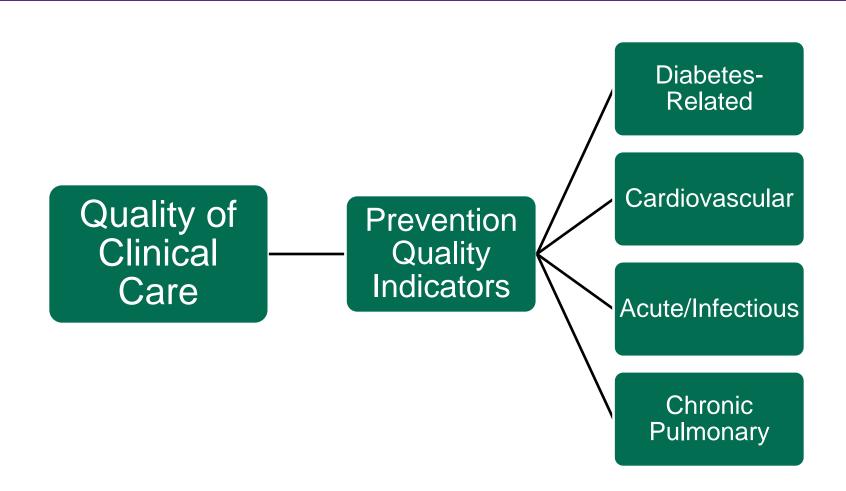
- Worse than the benchmark

Corridor Corridor Corridor Compared Compared to Compared to Healthy Benchmark to Past **People** Counties\* Years' Data 2020 Goal (Quartiles) (CI) Percent Uninsured Access to Physician-to-Clinical N/A Population Ratio Care Emergency N/A Department Use \*Benchmark Counties are: Maricopa, Los Angeles, Cook, Miami-Dade, Bexar, Harris and

**Stemmons** 

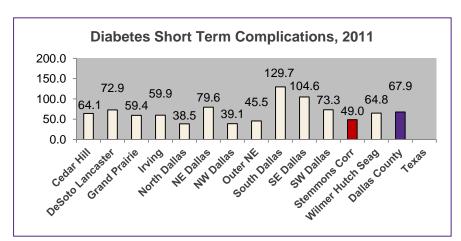


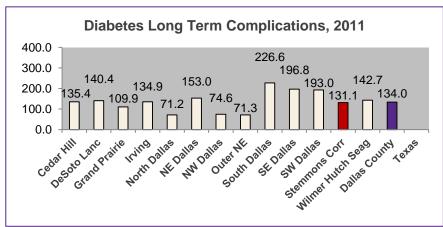
## Quality of care

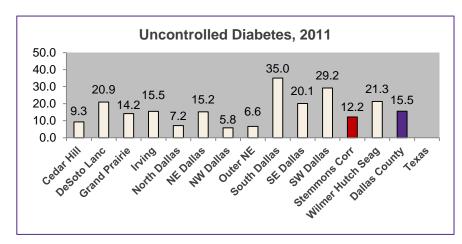


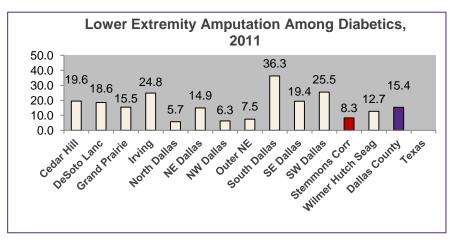


### Healthcare Quality: Rate of Preventable Hospitalizations, 2011 Diabetes-Related Hospitalizations Stemmons Corridor Service Area



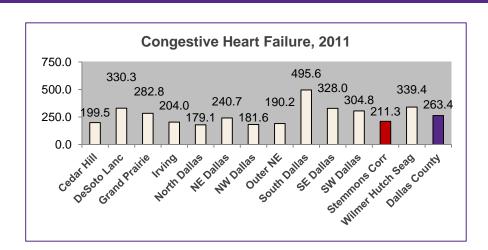


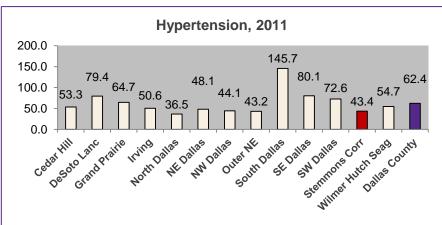


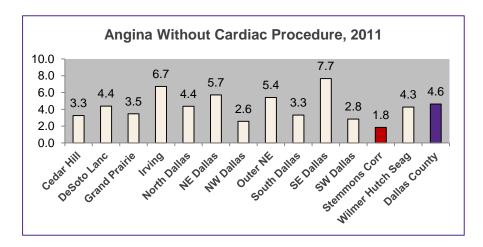




### Healthcare Quality: Rate of Preventable Hospitalizations, 2011 Cardiovascular Disease Hospitalizations Stemmons Corridor Service Area

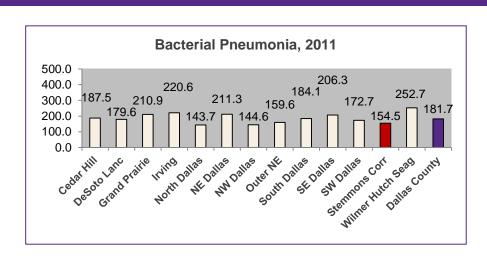


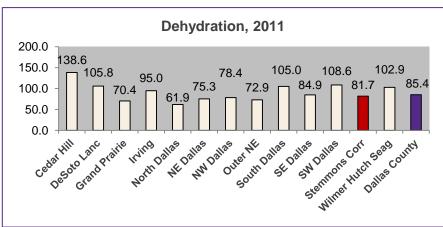


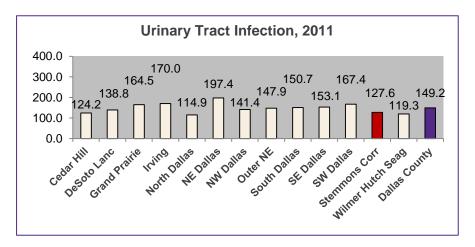




### Healthcare Quality: Rate of Preventable Hospitalizations, 2011 Acute/Infectious Disease Hospitalizations Stemmons Corridor Service Area

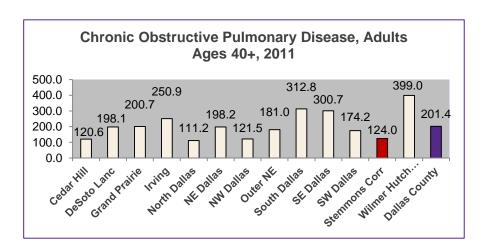


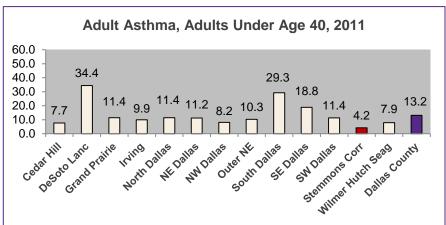






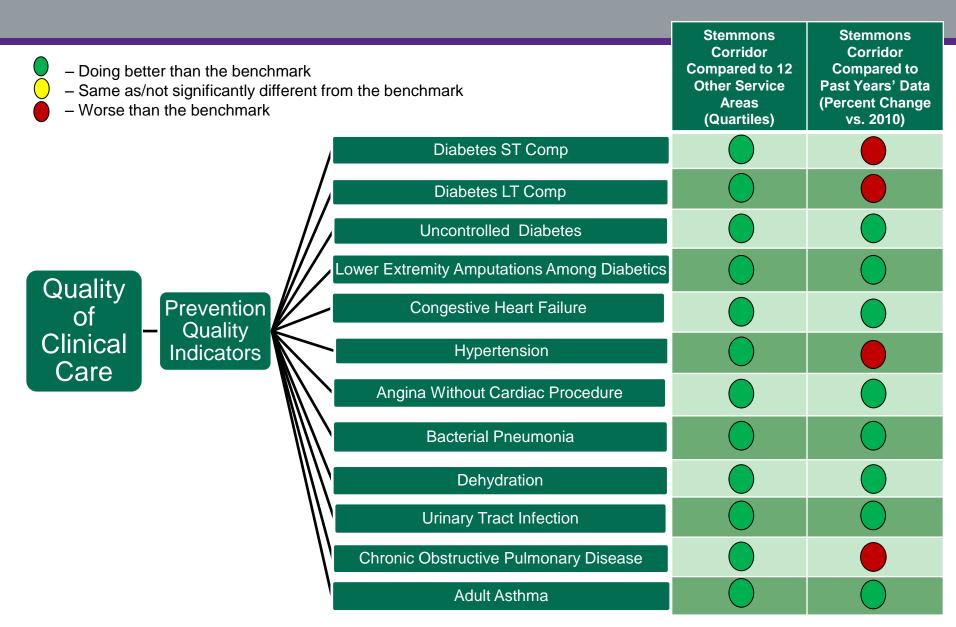
# Healthcare Quality: Rate of Preventable Hospitalizations, 2011 Chronic Pulmonary Disease Hospitalizations Stemmons Corridor Service Area





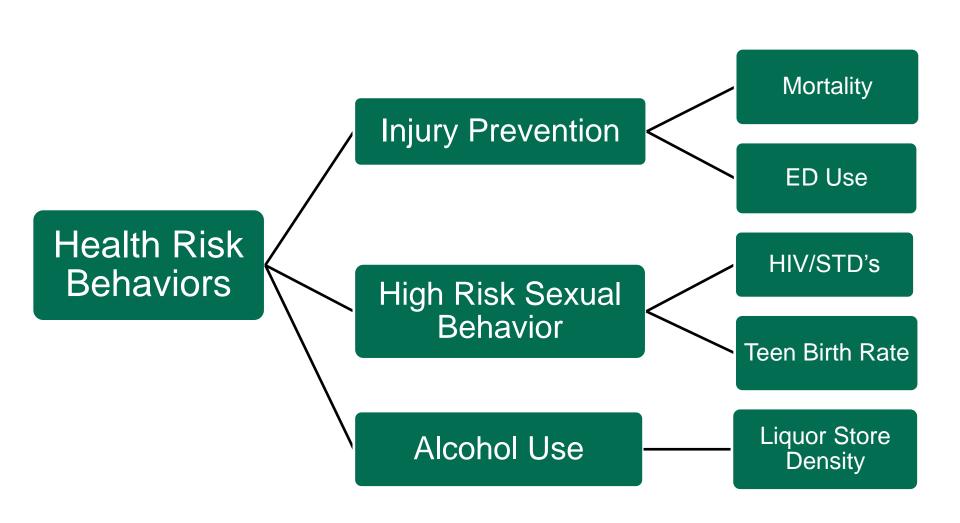


### **Healthcare Quality**



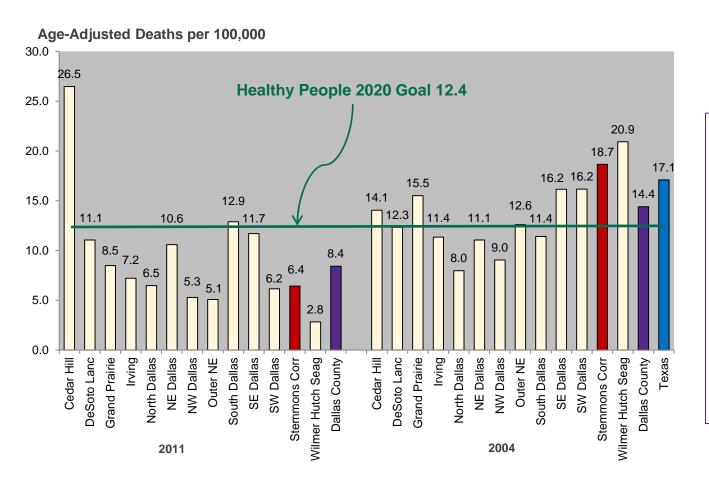




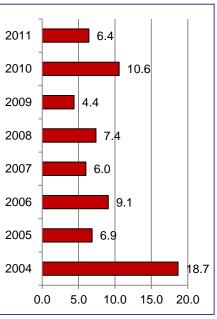




## Risk Factors: Auto Accident Mortality Rates



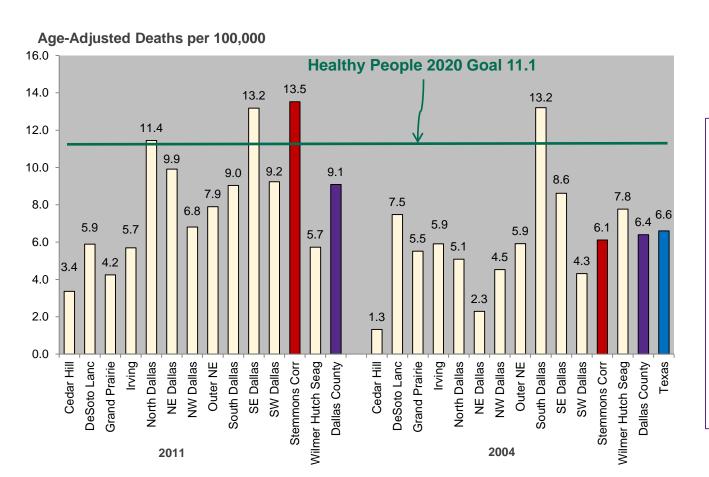
Auto Accident Mortality Rate, Age-Adjusted Death Rate per 100,000, Stemmons Corridor Service Area



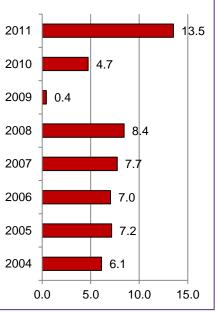


## Risk Factors: Accidental Poisoning Mortality Rates

Stemmons Corridor Service Area



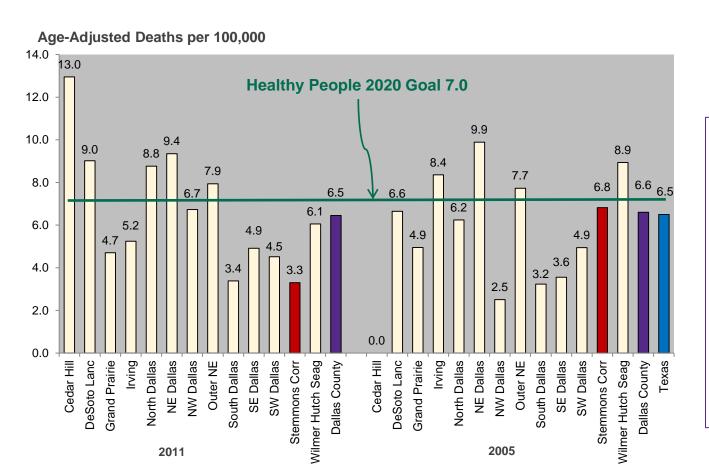
Accidental Poisoning Mortality Rate, Age-Adjusted Death Rate per 100,000, Stemmons Corridor Service Area



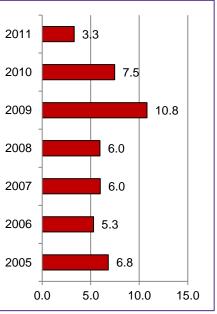


# Risk Factors: Accidental Falls Mortality Rates

Stemmons Corridor Service Area



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

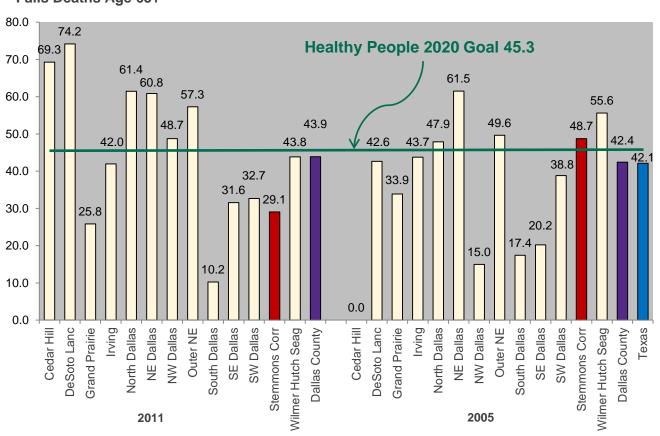




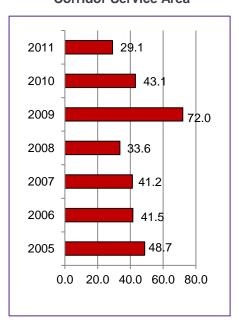
# Risk Factors: Falls Death Rates Among Seniors

Stemmons Corridor Service Area

#### Falls Deaths Age 65+



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



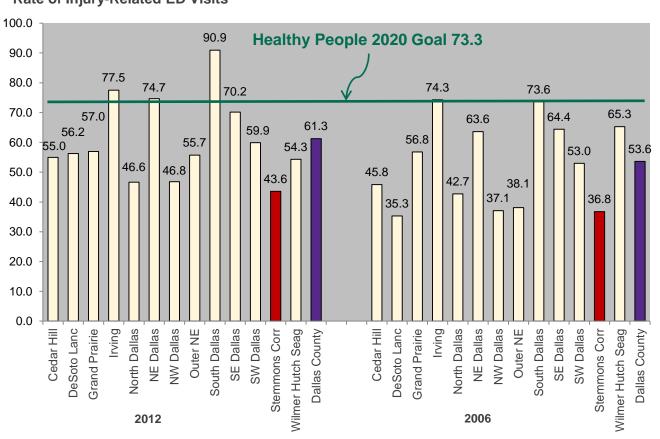
Source: Texas Department of State Health Services, Bureau of Vital Statistics, unpublished data; denominator population data from Claritas, Inc.; 2005 Dallas County data from Centers for Disease Control and Prevention, National Center for Health Statistics. Multiple Cause of Death File 2005-2006. CDC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



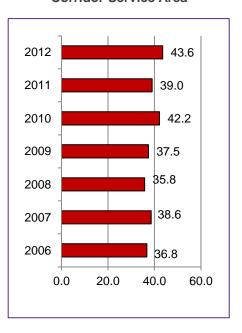
## Risk Factors: Rate of Injury-Related ED Visits

Stemmons Corridor Service Area

#### Rate of Injury-Related ED Visits



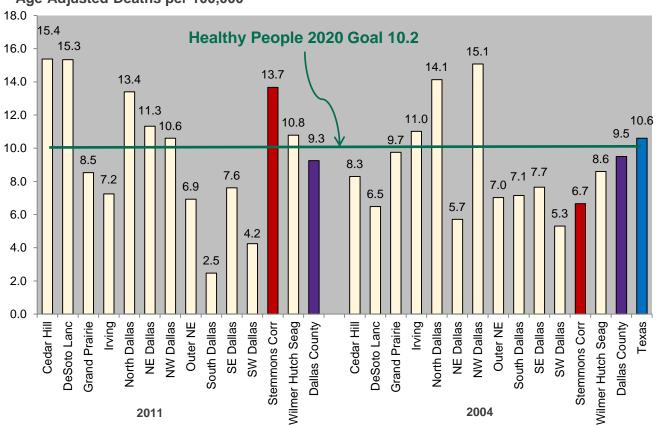
Rate of Injury-Related ED Visits, per 1,000, Stemmons Corridor Service Area



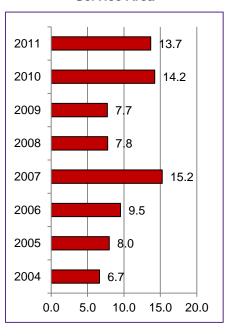


## Risk Factors: Suicide **Mortality Rates**



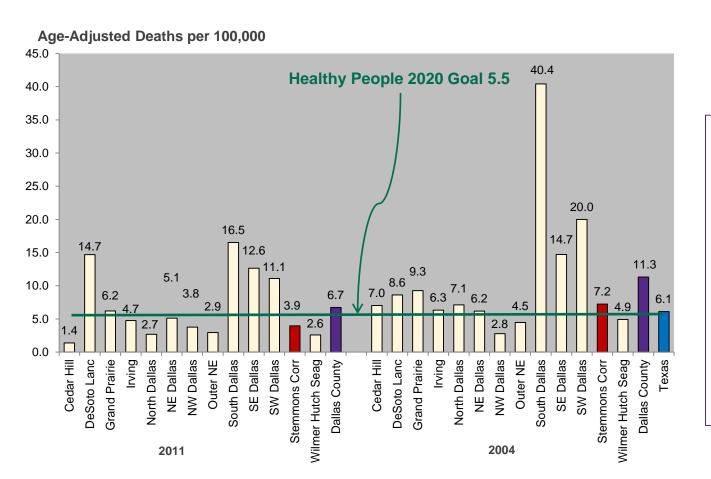


Suicide Mortality Rate, Age-Adjusted Death Rate per 100,000, Stemmons Corridor **Service Area** 





## Risk Factors: Homicide Mortality Rates

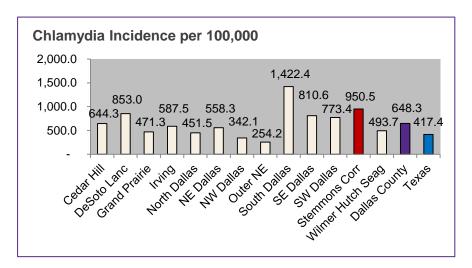


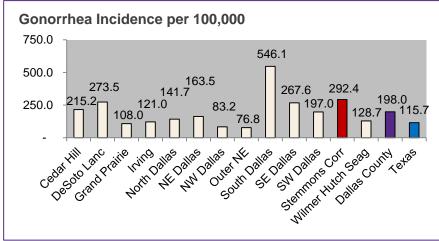
Homicide Mortality Rate, Age-Adjusted Death Rate per 100,000, Stemmons Corridor Service Area

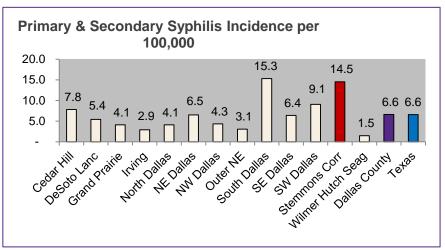


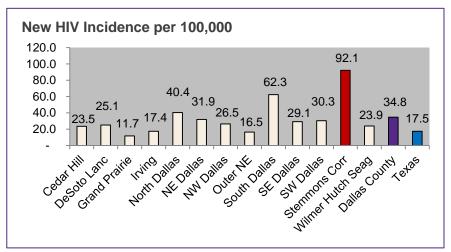


# Risk Factors: High Risk Sexual Behavior, Sexually Transmitted Disease Incidence Rates, 2011 Stemmons Corridor Service Area



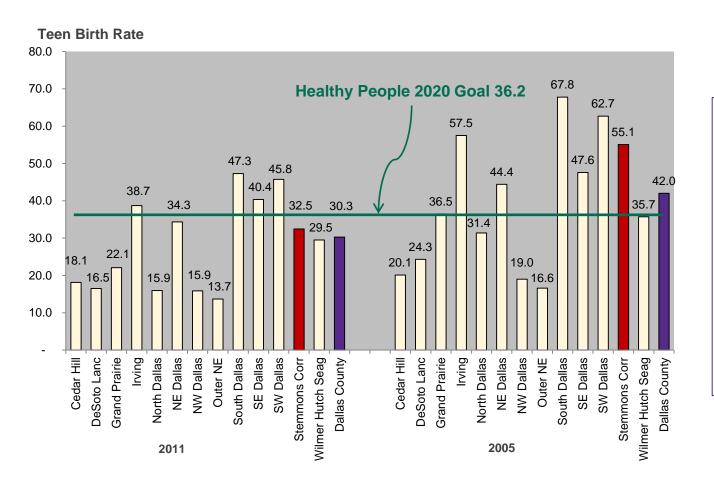




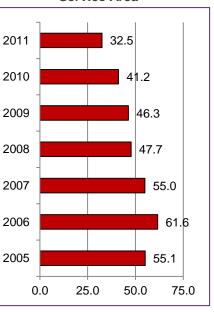




# Risk Factors: High Risk Sexual Behavior, Teen Birth Rates



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

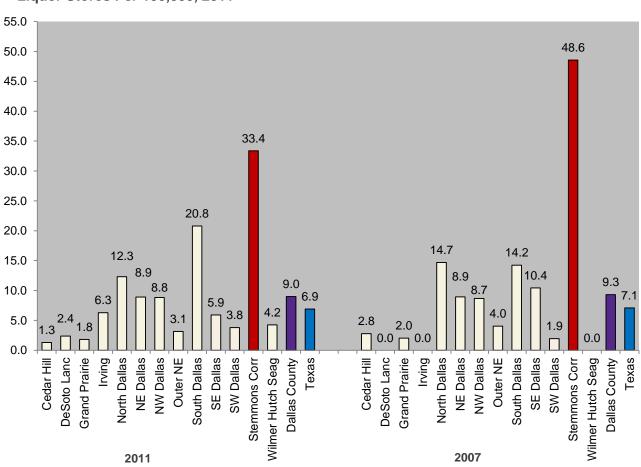




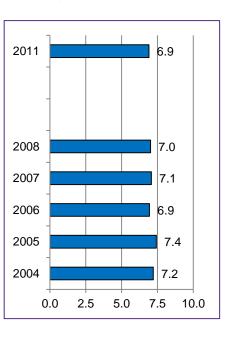
# Risk Factors: Liquor Store Density, 2011

Stemmons Corridor 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**

**Stemmons** 

Stemmons

**Stemmons** 



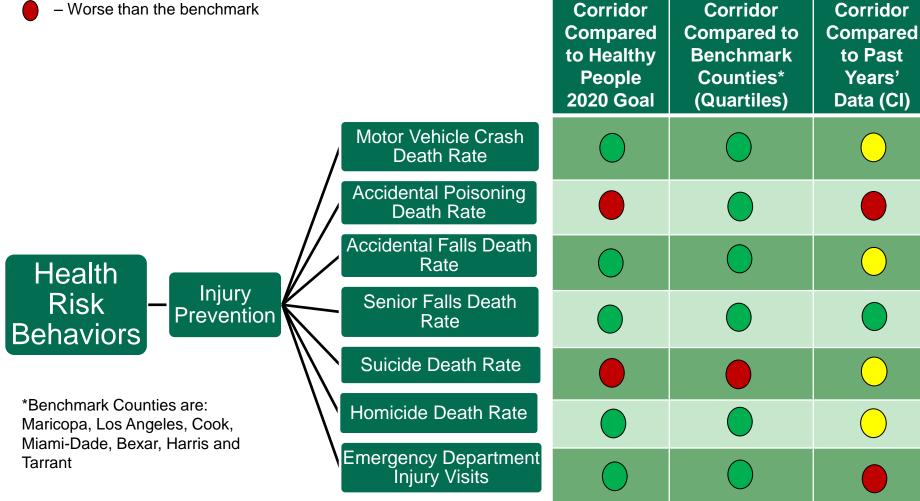
- Doing better than the benchmark



- Same as/not significantly different from the benchmark

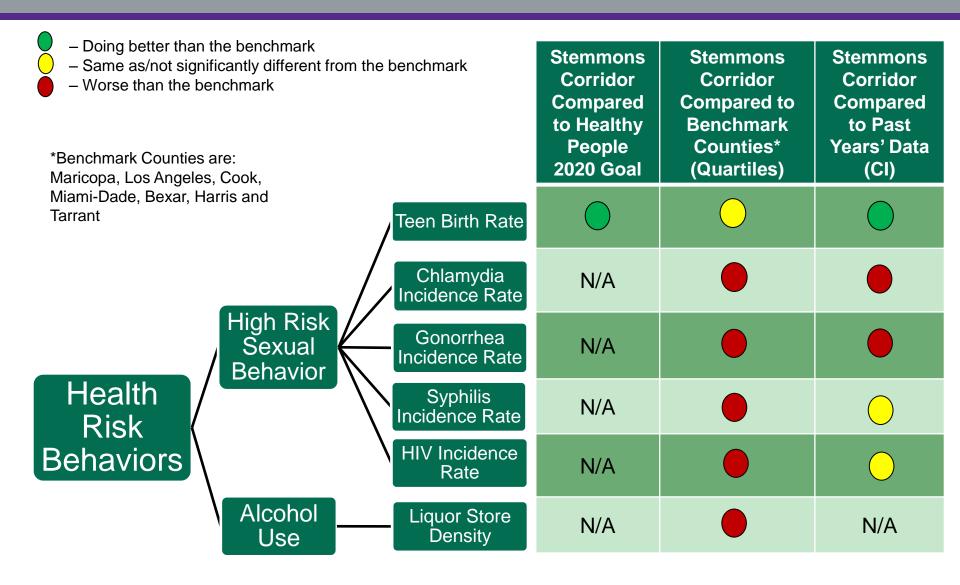


- Worse than the benchmark



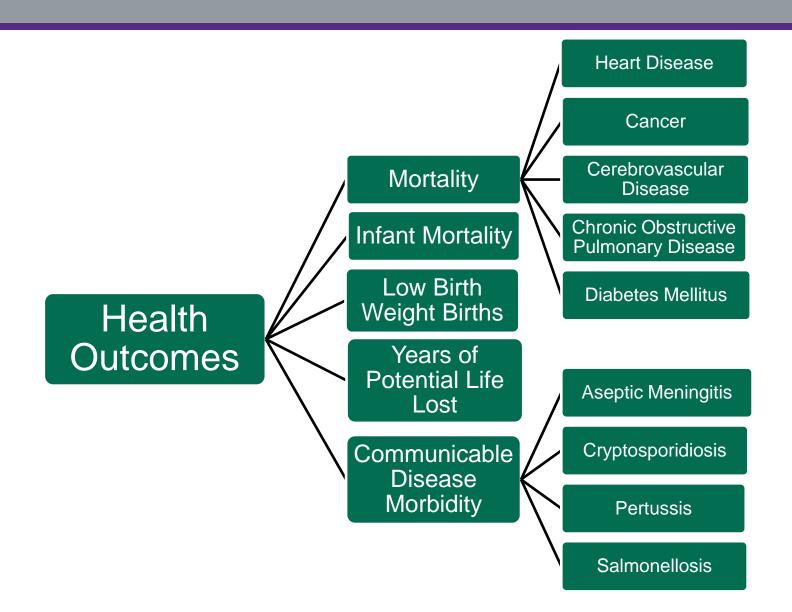


### **Health Risk Behaviors**



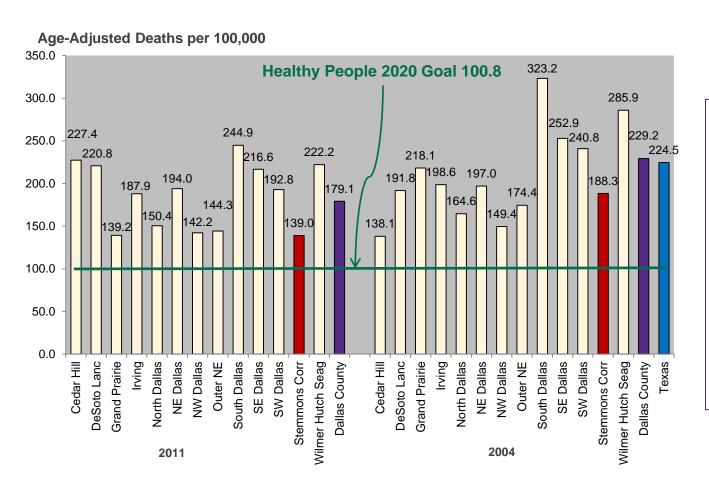


### **Health Outcomes**

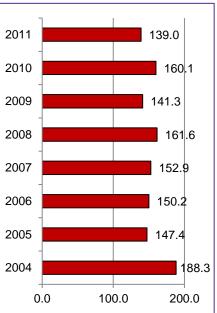




## Health Outcomes: Heart Disease Mortality Rates



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

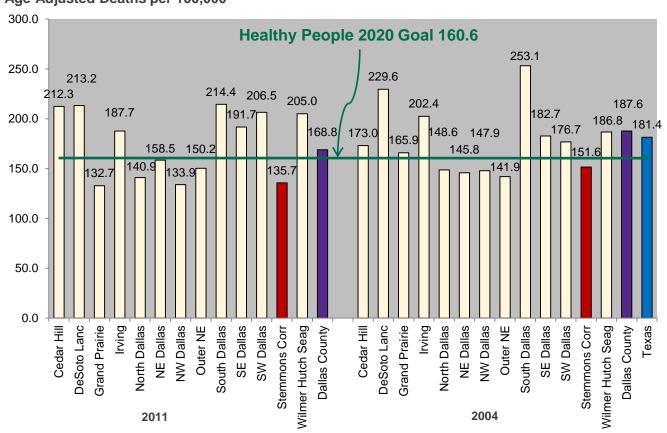




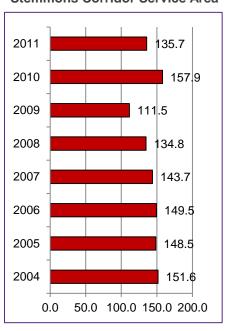
# Health Outcomes: Cancer Mortality Rates

Stemmons Corridor Service Area

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



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

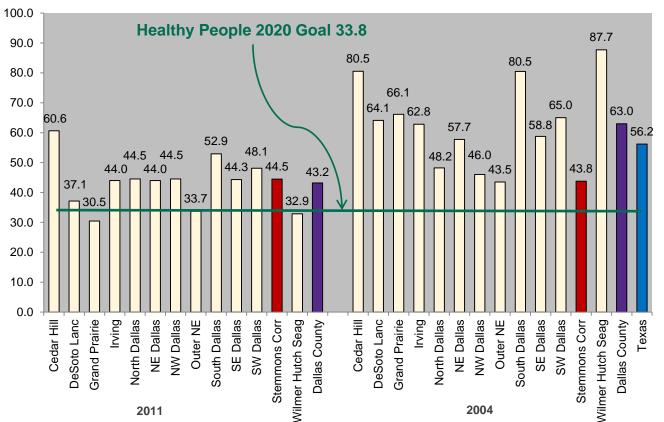




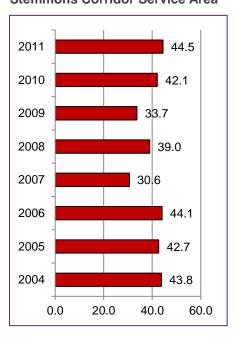
## Health Outcomes: Cerebrovascular **Disease Mortality Rates**

Stemmons Corridor Service Area

#### Age-Adjusted Deaths per 100,000 100.0



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

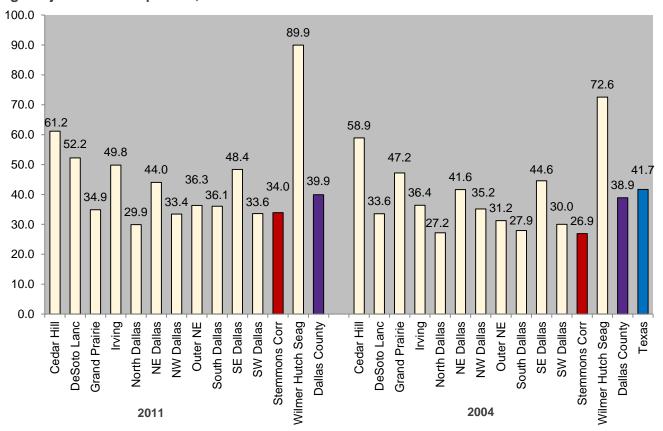




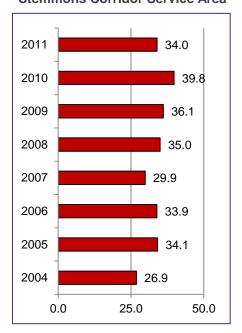
### Health Outcomes: Chronic Obstructive Pulmonary Disease Mortality Rates

Stemmons Corridor Service Area

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



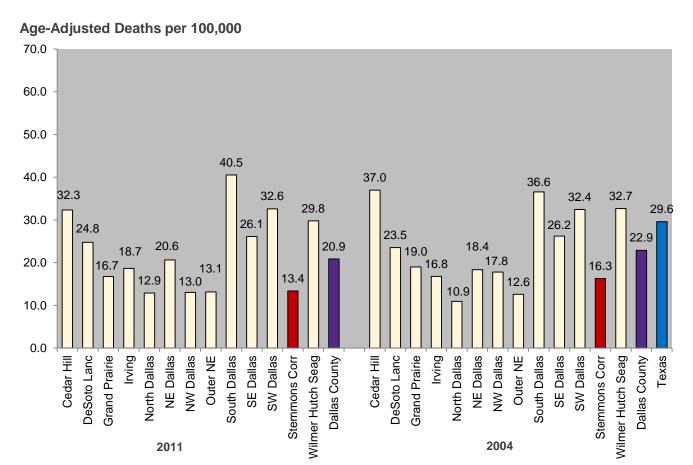
Chronic Obstructive Pulmonary Disease Mortality Rate, Age-Adjusted Death Rate per 100,000, Stemmons Corridor Service Area



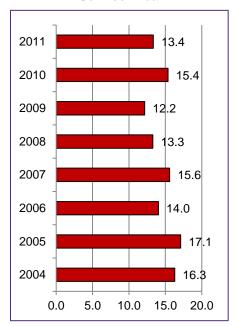
NOTE: No Healthy People 2020 goal matches this metric.



# Health Outcomes: Diabetes Mortality Rates



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

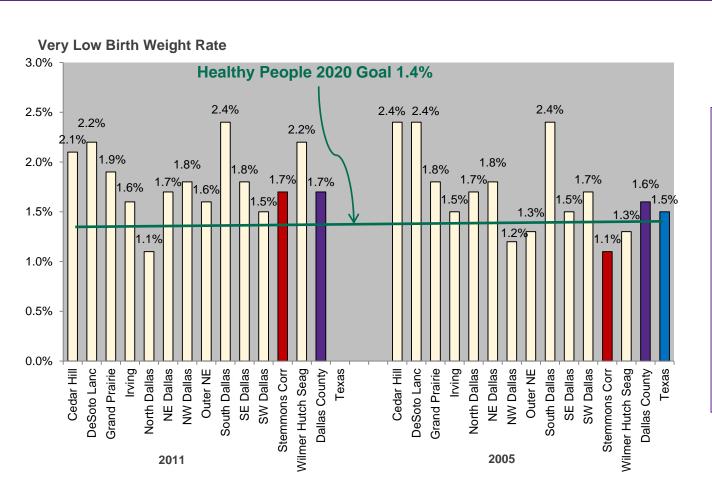


NOTE: No Healthy People 2020 goal matches this metric.

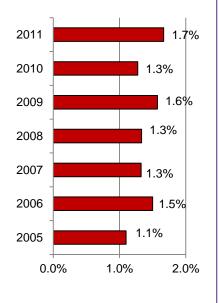


## Health Outcomes: Birth Outcomes, Rate of Very Low Birth Weight Births

Stemmons Corridor Service Area



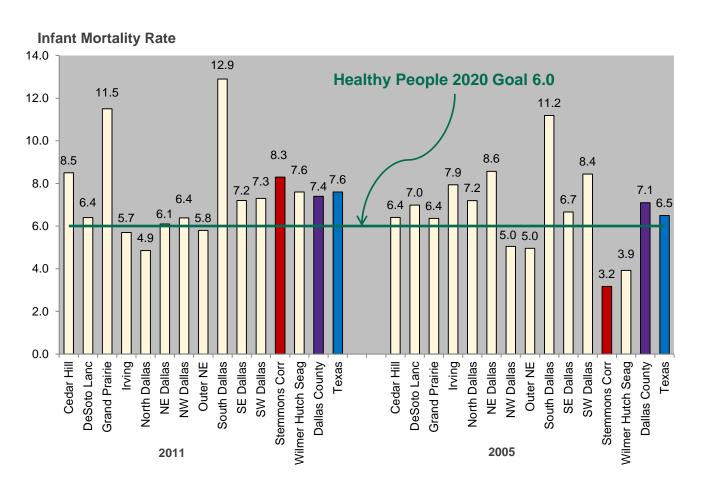
Very Low Birth Weight Rate, % of Births Below 1500 Grams at Birth, Stemmons Corridor Service Area



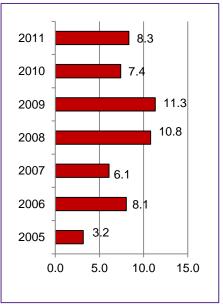


# Health Outcomes: Birth Outcomes, Infant Mortality Rate

Stemmons Corridor Service Area



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

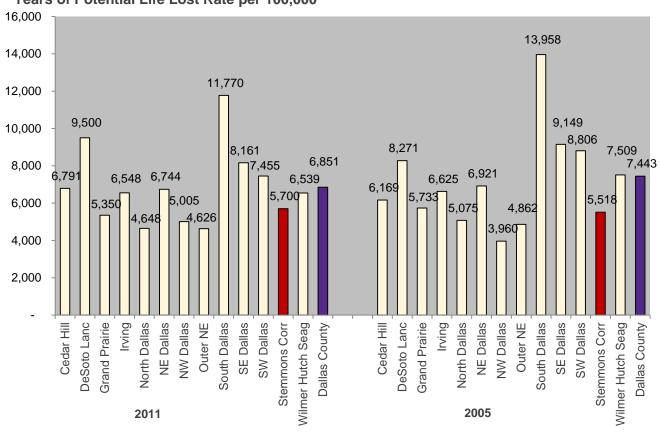




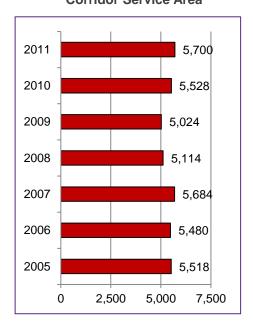
# Health Outcomes: Years of Potential Life Lost, All Causes

Stemmons Corridor Service Area





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

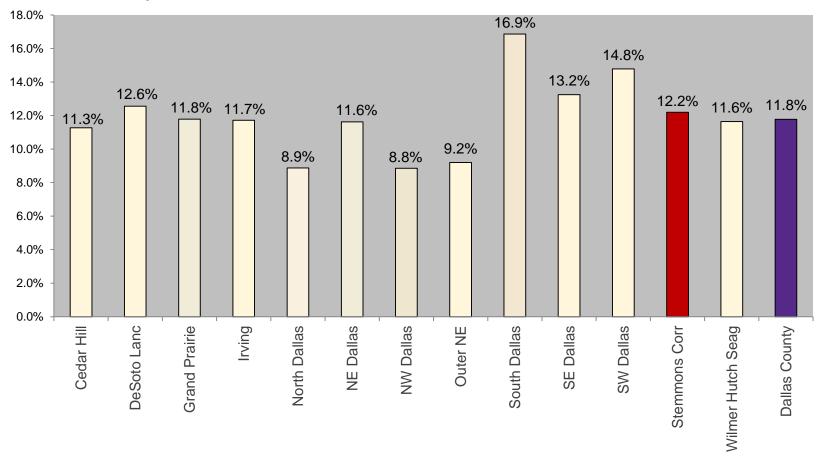


\*Years of Potential Life Lost Rate is defined as the rate of deaths under age 75 per 100,000 population under age 75.



## Health Outcomes: Estimated Diabetes Prevalence Rates (Diagnosed and Undiagnosed) <u>Stemmons Corridor Service Area</u>

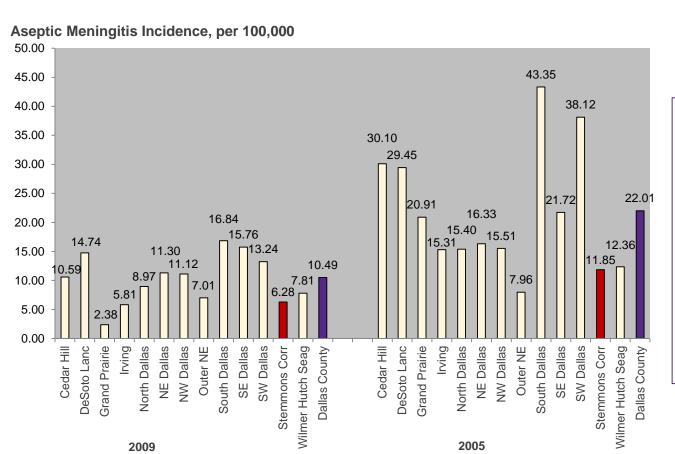
#### **Diabetes Prevalence, percent**



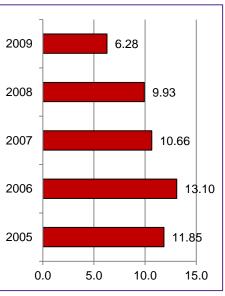


# Health Outcomes: Reportable Communicable Disease Rates

Stemmons Corridor Service Area





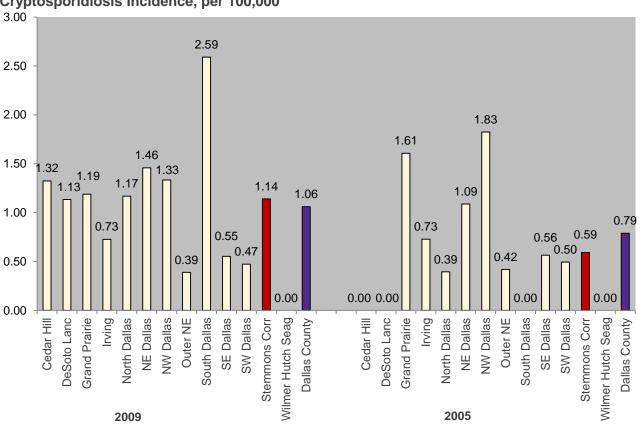




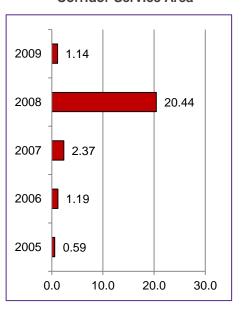
## **Health Outcomes: Reportable Communicable Disease Rates**

Stemmons Corridor Service Area





#### **Cryptosporidiosis Incidence** Rate, per 100,000, Stemmons **Corridor Service Area**

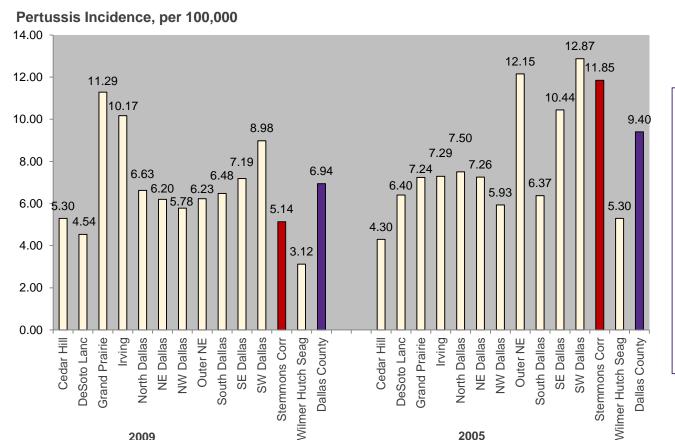


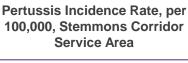


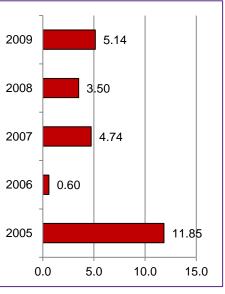
2009

## **Health Outcomes: Reportable Communicable Disease Rates**

Stemmons Corridor Service Area







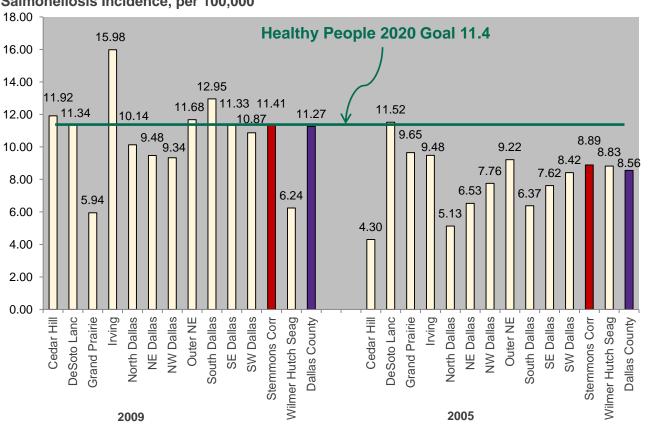
2005



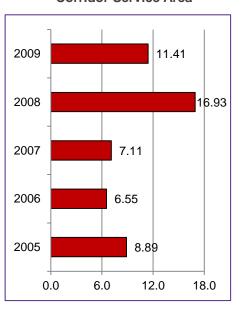
# Health Outcomes: Reportable Communicable Disease Rates

Stemmons Corridor Service Area

#### Salmonellosis Incidence, per 100,000



#### Salmonellosis Incidence Rate, per 100,000, Stemmons Corridor Service Area

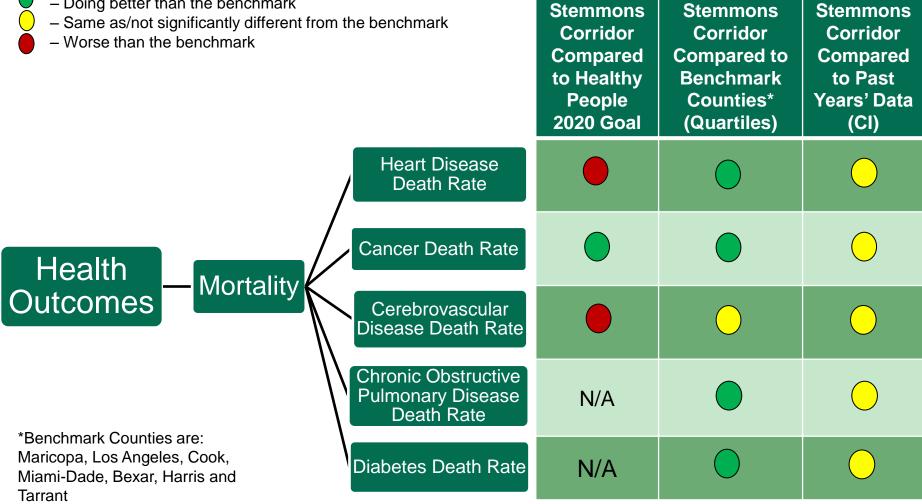




### **Health Outcomes**

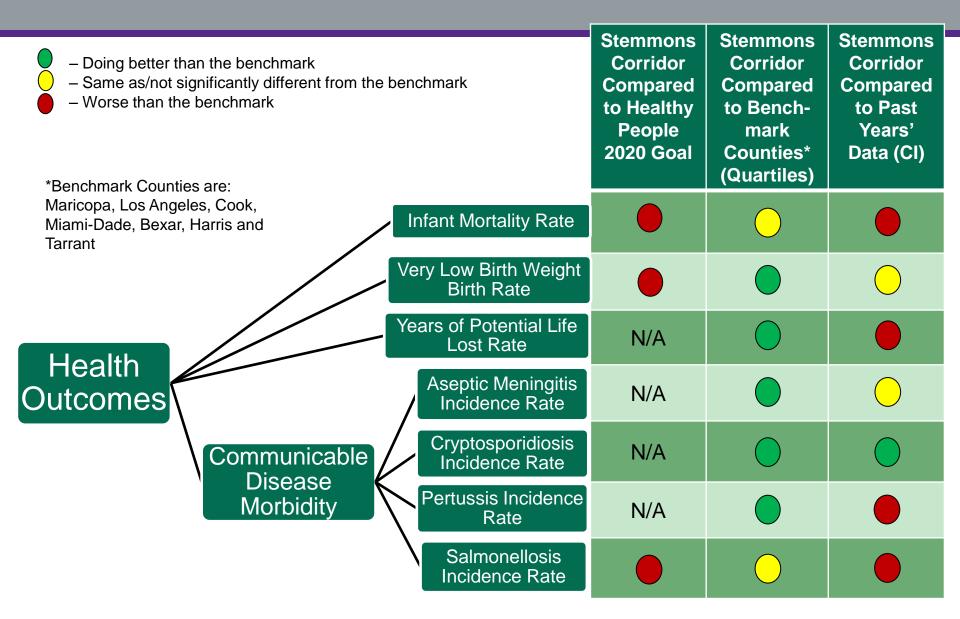


- Doing better than the benchmark



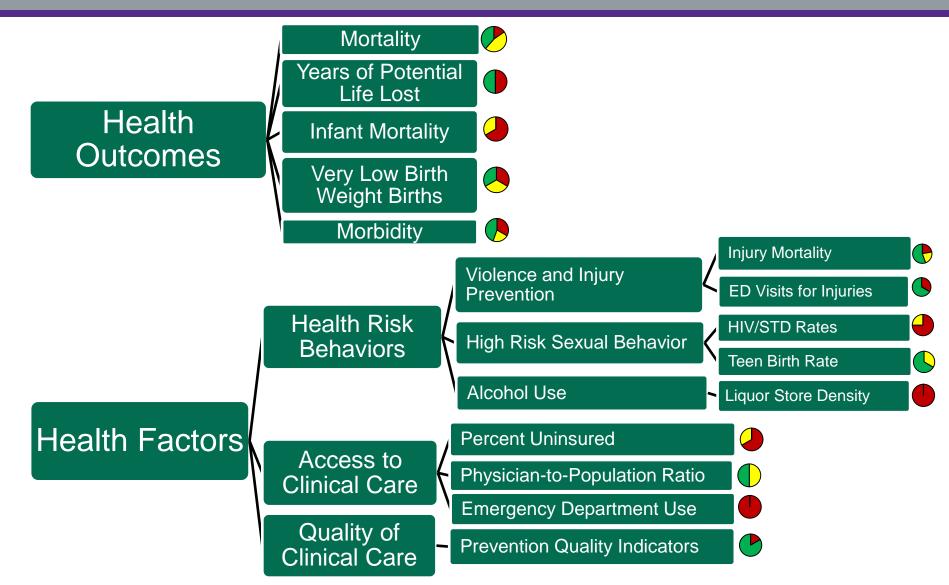


### **Health Outcomes**



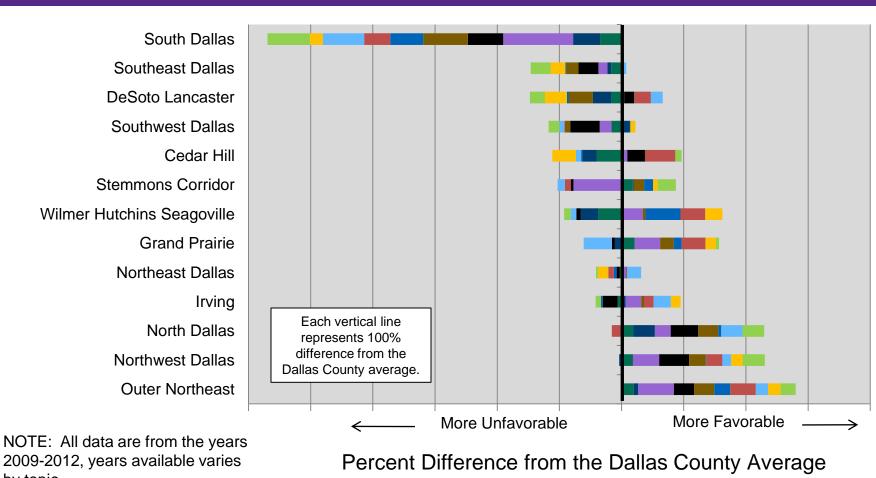


## Summary – Model With Stoplight Pie Charts, Stemmons Corridor Service Area





## Parkland Deviations from the Dallas County mean



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.





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.