### Community Health

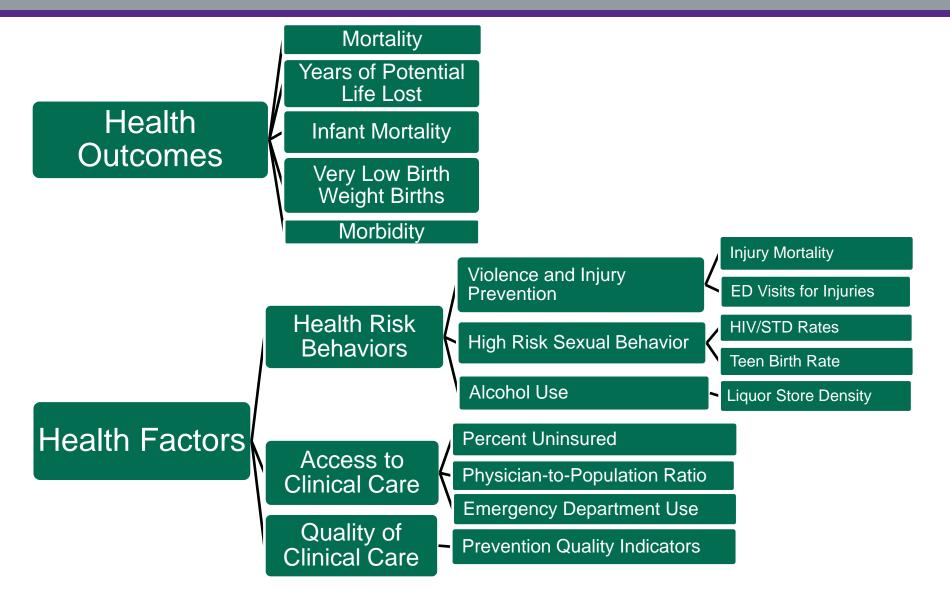
### Assessment







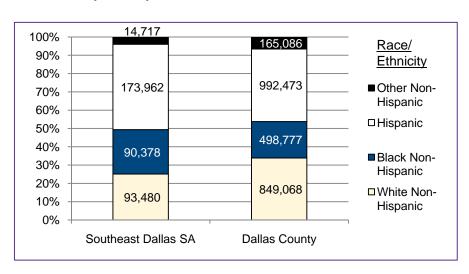
# Organizational Model For the Community Health Dashboard

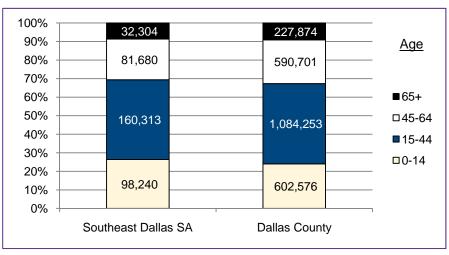


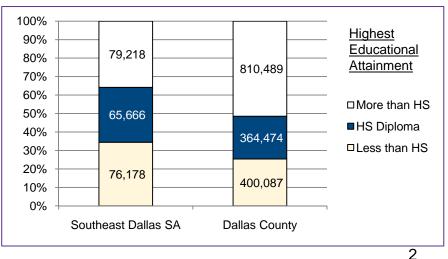


### **Demographic Profile**

- The population of the Southeast Dallas Service Area is slightly younger than the county population.
- The largest race/ethnic group in the Service Area population is Hispanics, comprising 46.7% of the population.
- Southeast Dallas has a somewhat smaller proportion of people with a high school diploma or more (65.5%) compared with Dallas County as a whole (74.5%).





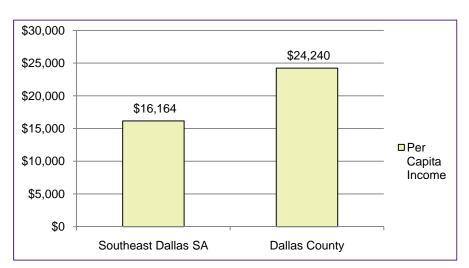


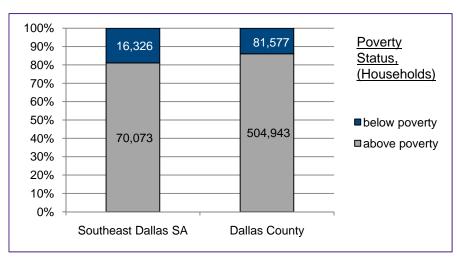


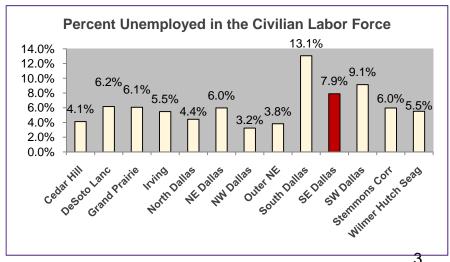
### **Demographic Profile**

Southeast Dallas Service Area

- The Southeast Dallas Service Area has a large number of households in poverty (18.9%) compared with the Dallas County rate (13.9%), the third highest poverty rate of the 13 Dallas County service areas.
- The Service Area's per capita income was the third lowest of the service areas.
- The percent unemployed for this Service Area is the 3<sup>nd</sup> worst among the 13 Service Areas



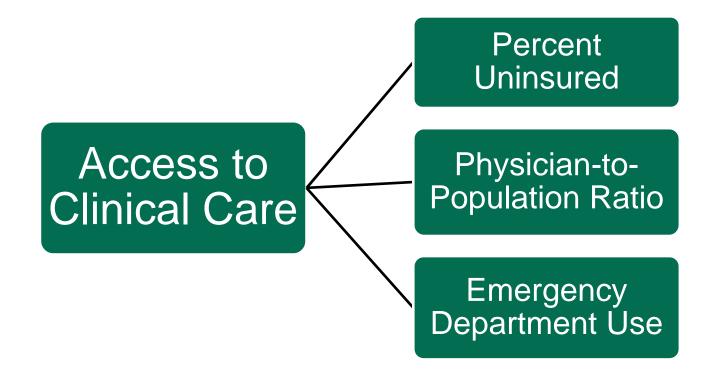




Source: Nielson/Claritas, Inc. Pop-Facts mid-2010 version





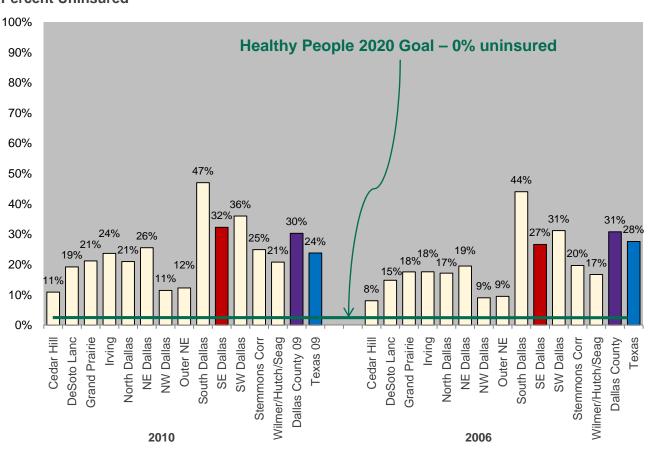




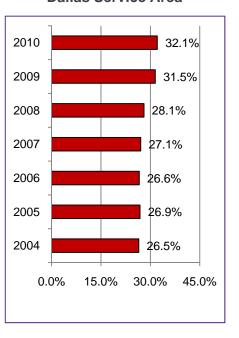
### Access to Healthcare: Percent Without Healthcare Insurance

Southeast Dallas Service Area

#### **Percent Uninsured**



#### Percent Without Health Insurance, Southeast Dallas Service Area



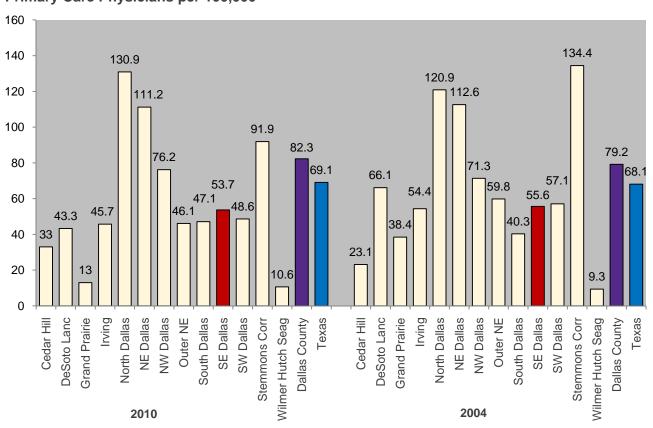
Source: 2006 Solucient, Inc.; 2010 Market Planner Plus; Denominator population data from Claritas, Inc.; except 2010 from Nielson/Claritas, Inc. Pop-Facts; Dallas County and Texas rates from US Census Bureau's American Community Survey 2009



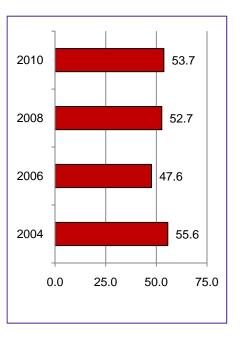
### Access to Healthcare: Primary Care Physician-to-Population Ratio

Southeast Dallas Service Area

#### Primary Care Physicians per 100,000



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



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

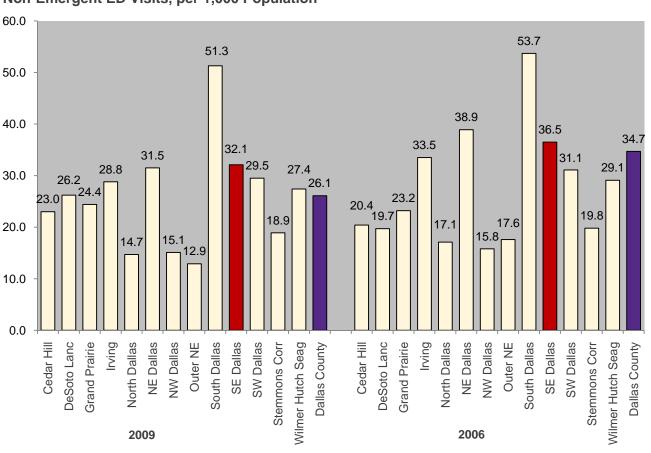
County and State sources is Texas Bureau of Primary Care. <a href="http://www.dshs.state.tx.us/chs/hprc/tables/Primary-Care-Physicians-(PC)-by-County-of-Practice---September,-2010/">http://www.dshs.state.tx.us/chs/hprc/tables/Primary-Care-Physicians-(PC)-by-County-of-Practice---September,-2010/</a> and <a href="http://www.dshs.state.tx.us/chs/hprc/tables/04PC.shtm">http://www.dshs.state.tx.us/chs/hprc/tables/04PC.shtm</a>



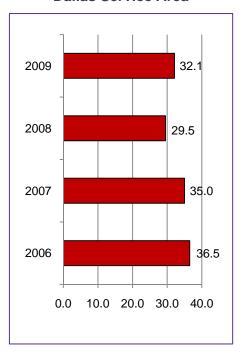
### Access to Healthcare: Non-Emergent ED Utilization

Southeast Dallas Service Area

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



Rate of Non-Emergent ED Visits, per 1,000, Southeast 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

Southeast

Southeast



- Doing better than the benchmark



- Same as/not significantly different from the benchmark

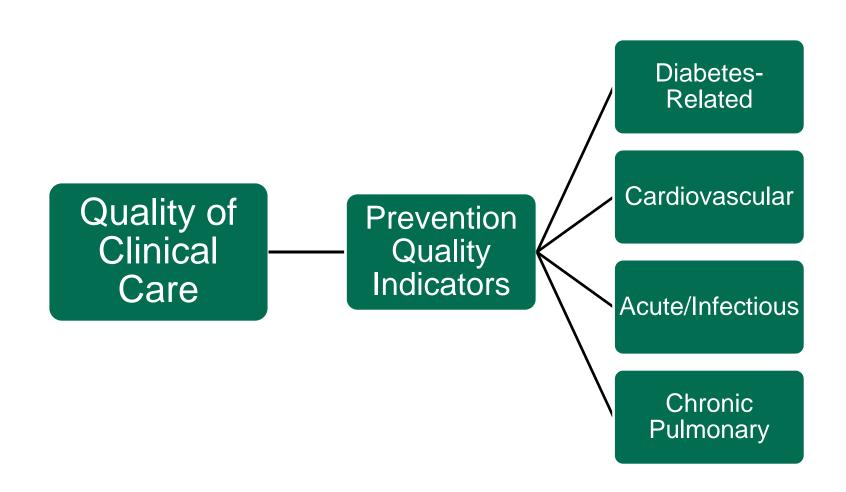
**Dallas Dallas Dallas** - Worse than the benchmark **Compared** Compared to Compared to Healthy **Benchmark** to Past **People** Counties\* Years' Data 2020 Goal (Quartiles) (CI) Percent Uninsured Access to Physician-to-N/A Clinical Population Ratio Care Emergency N/A N/A Department Use \*Benchmark Counties are: Maricopa, Los Angeles, Cook,

Southeast

Miami-Dade, Bexar, Harris and Tarrant

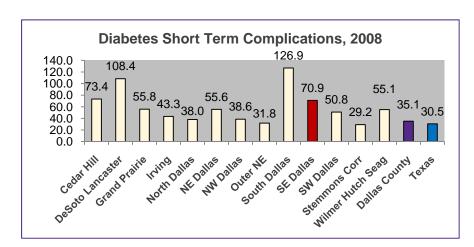


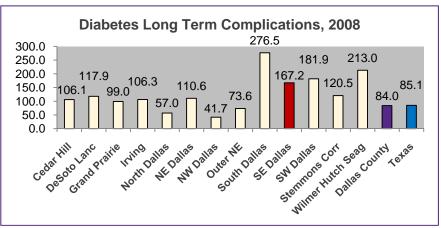
### **Quality of care**

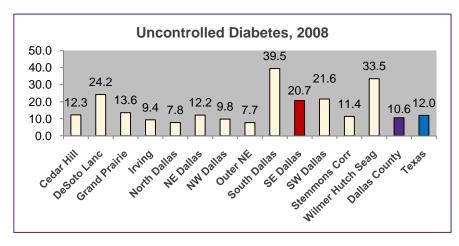


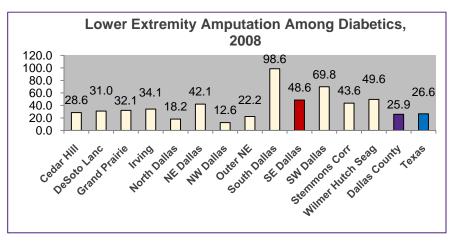


# Healthcare Quality: Rate of Preventable Hospitalizations, 2008 Diabetes-Related Hospitalizations Southeast Dallas Service Area



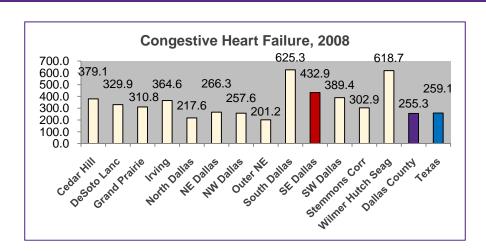


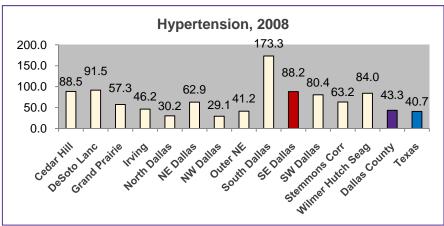


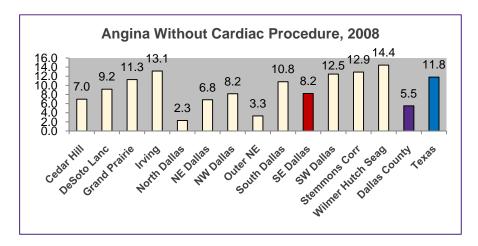




#### Healthcare Quality: Rate of Preventable Hospitalizations, 2008 Cardiovascular Disease Hospitalizations Southeast Dallas Service Area

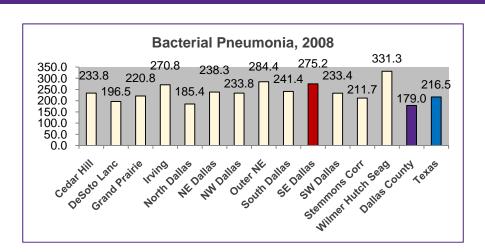


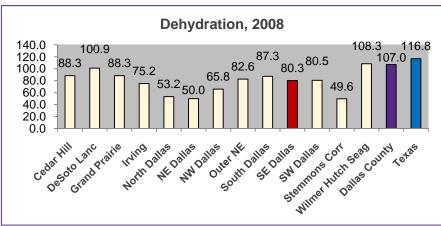


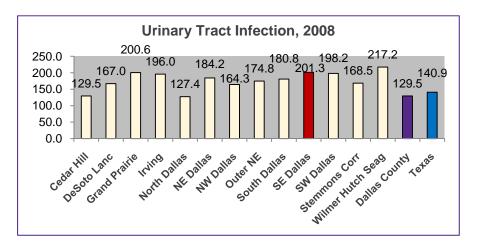




#### Healthcare Quality: Rate of Preventable Hospitalizations, 2008 Acute/Infectious Disease Hospitalizations Southeast Dallas Service Area

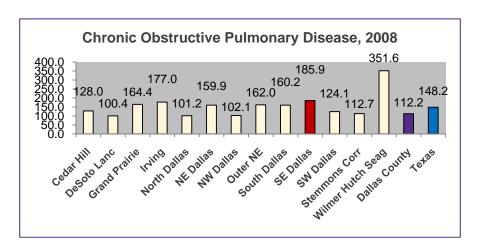


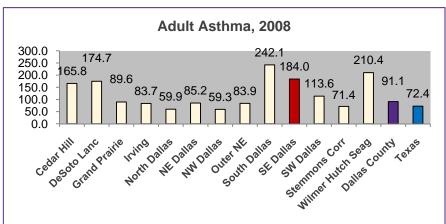






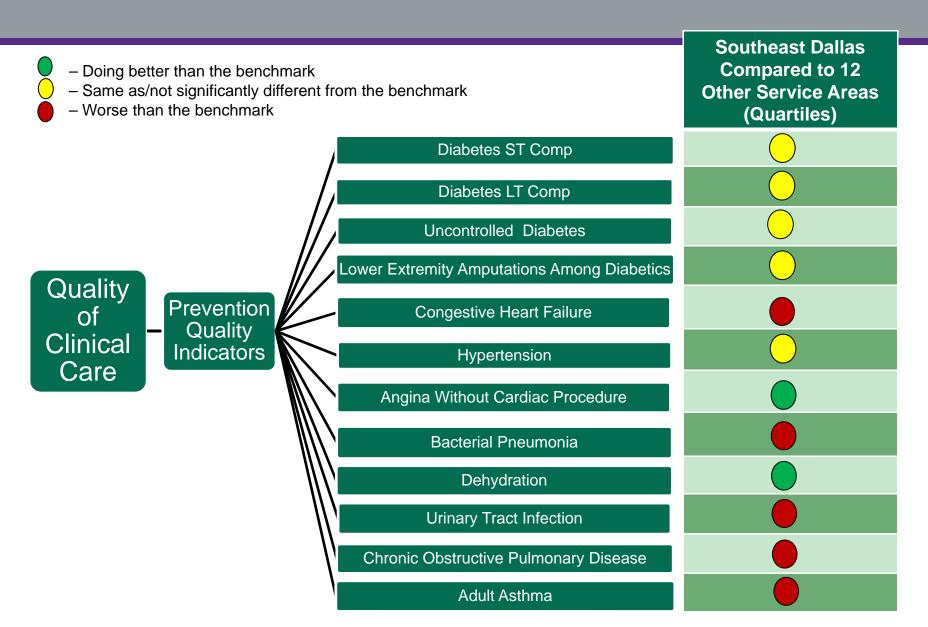
# Healthcare Quality: Rate of Preventable Hospitalizations, 2008 Chronic Pulmonary Disease Hospitalizations Southeast Dallas Service Area





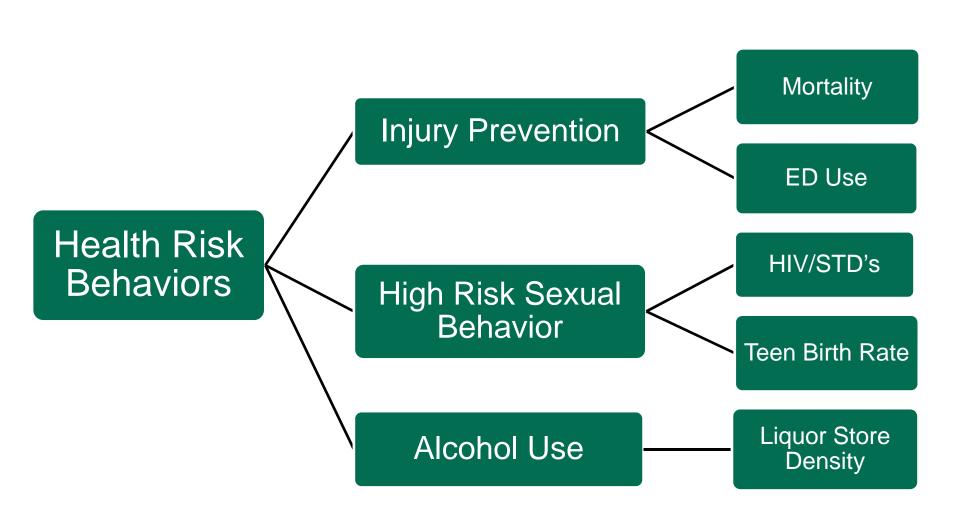


### **Healthcare Quality**







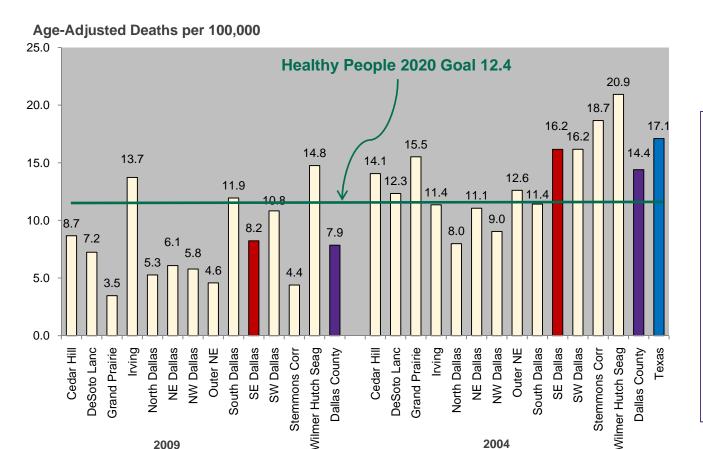




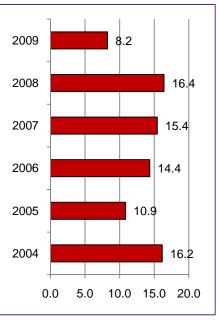
2009

### Risk Factors: Auto Accident **Mortality Rates**

Southeast Dallas Service Area



**Auto Accident Mortality Rate,** Age-Adjusted Death Rate per 100,000, Southeast Dallas **Service Area** 

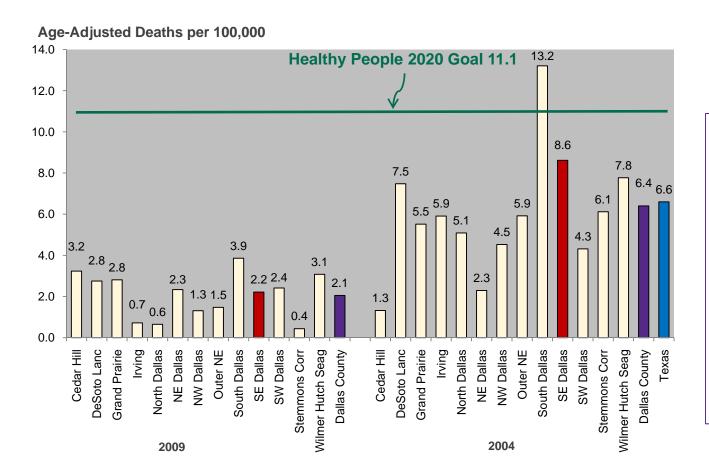


2004

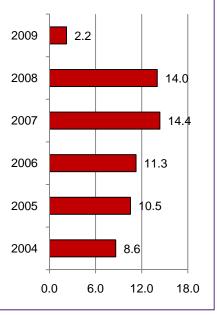


### Risk Factors: Accidental Poisoning Mortality Rates

Southeast Dallas Service Area



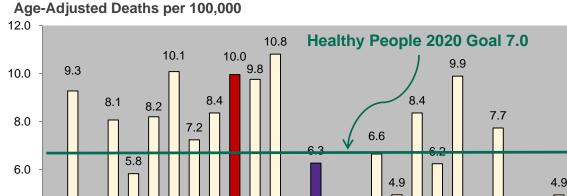
Accidental Poisoning Mortality Rate, Age-Adjusted Death Rate per 100,000, Southeast Dallas Service Area



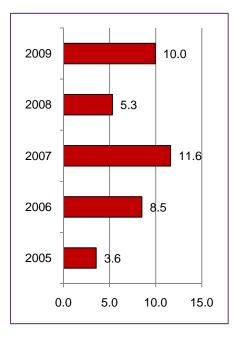


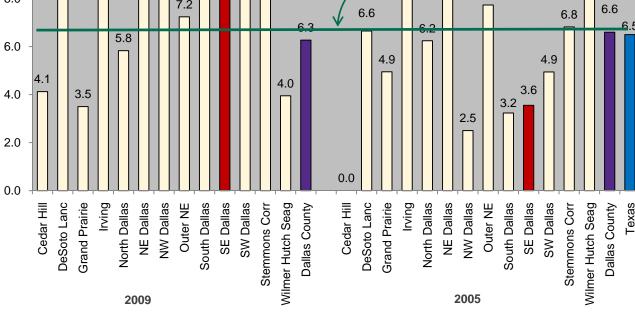
## Risk Factors: Accidental Falls Mortality Rates

8.9



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



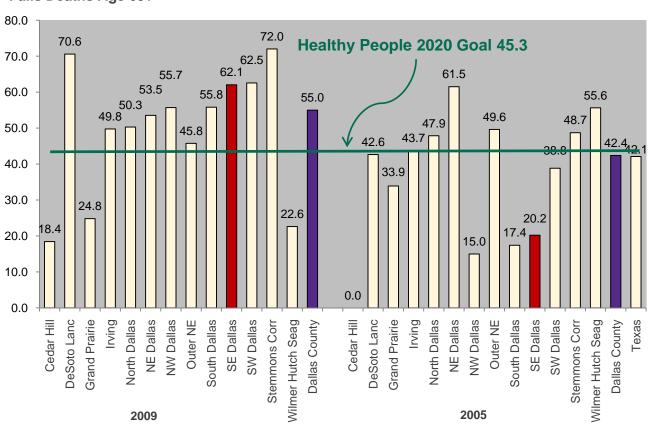




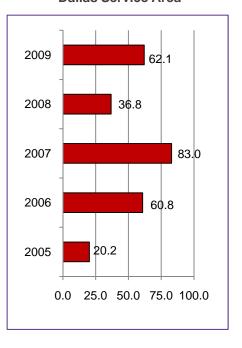
## Risk Factors: Falls Death Rates Among Seniors

Southeast Dallas Service Area

#### Falls Deaths Age 65+



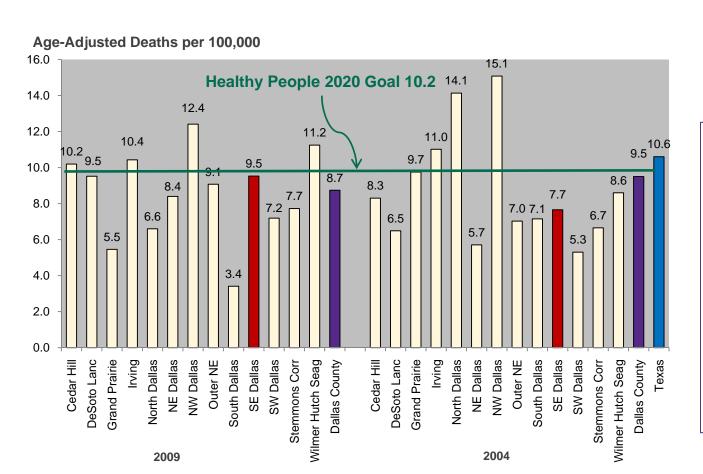
Falls fatality rates, ages 65+, per 100,000, Southeast Dallas Service Area



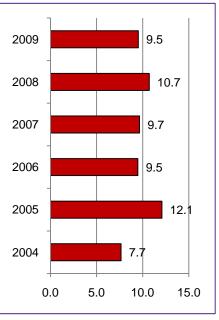
Source: Texas Department of State Health Services, Bureau of Vital Statistics, unpublished data; denominator population data from Claritas, Inc.; 2005 Dallas County data from Centers for Disease Control and Prevention, National Center for Health Statistics. Multiple Cause of Death File 2005-2006. CDC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



### Risk Factors: Suicide Mortality Rates

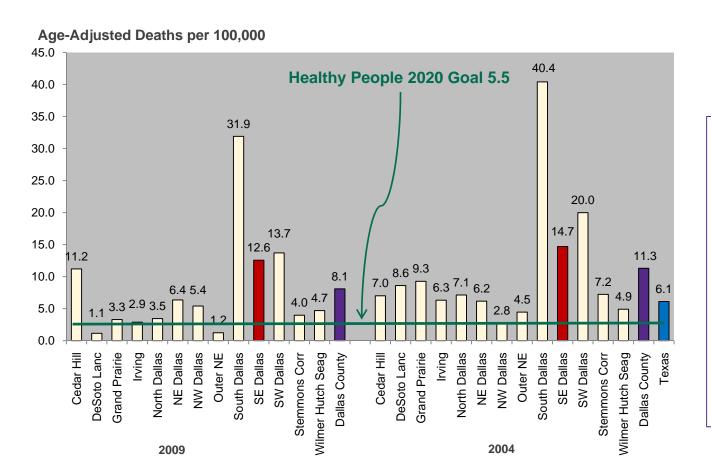


Suicide Mortality Rate, Age-Adjusted Death Rate per 100,000, Southeast Dallas Service Area

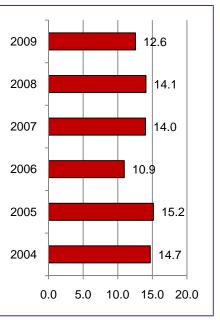




### Risk Factors: Homicide Mortality Rates

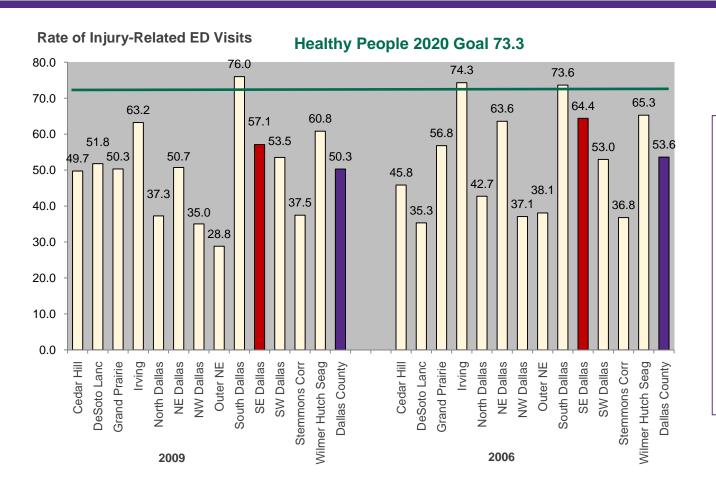


Homicide Mortality Rate, Age-Adjusted Death Rate per 100,000, Southeast Dallas Service Area

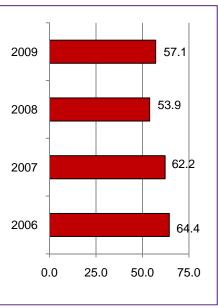




### Risk Factors: Rate of Injury-Related ED Visits

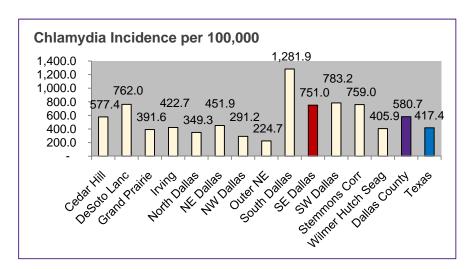


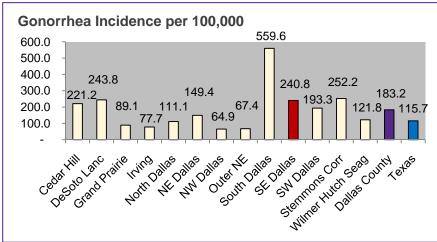
Rate of Injury-Related ED Visits, per 1,000, Southeast Dallas Service Area

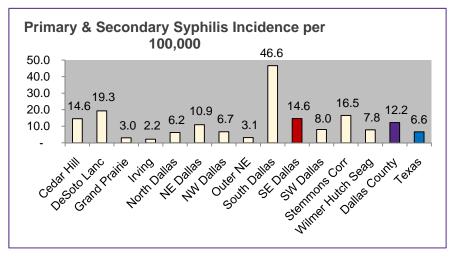


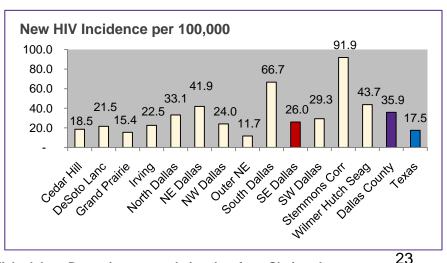


# Risk Factors: High Risk Sexual Behavior, Sexually Transmitted Disease Incidence Rates, 2009 Southeast Dallas Service Area





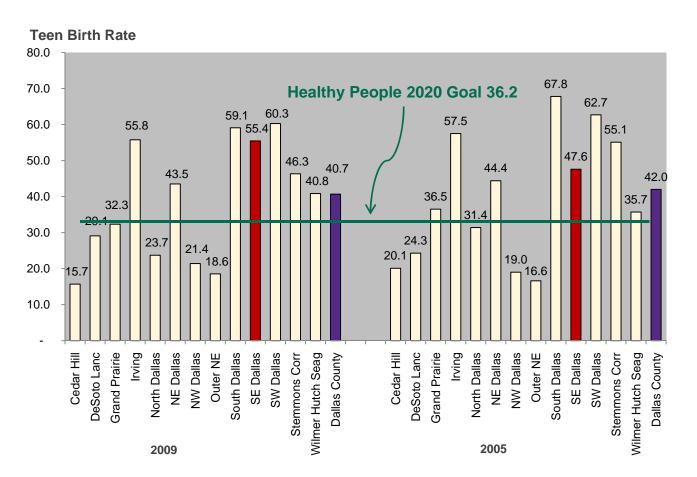






## Risk Factors: High Risk Sexual Behavior, Teen Birth Rates

Southeast Dallas Service Area



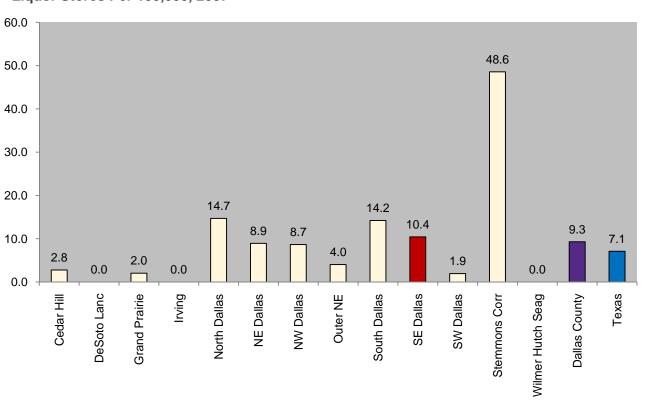
Ages 15-17, Southeast Dallas Service Area 2009 55.4 2008 55.1 2007 57.8 2006 52.4 2005 47.6 0.0 25.0 50.0 75.0

Teen Births, Rate Per 1,000 Girls

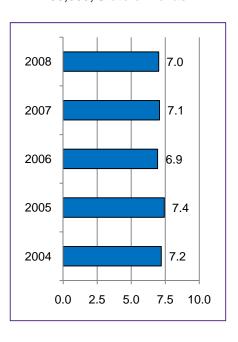


## Risk Factors: Liquor Store Density, 2007

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



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





#### **Health Risk Behaviors**

Southeast

Southeast

**Southeast** 



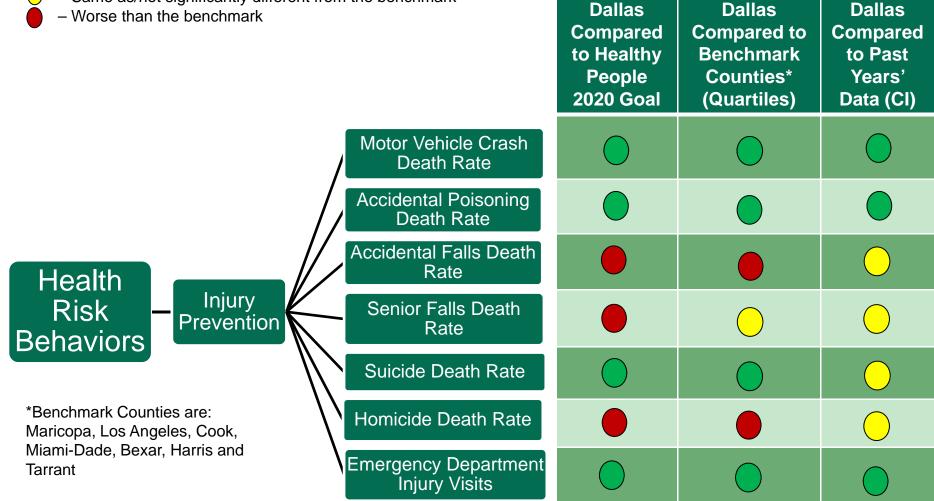
- Doing better than the benchmark



- Same as/not significantly different from the benchmark



- Worse than the benchmark





### **Health Risk Behaviors**



- Doing better than the benchmark

- Same as/not significantly different from the benchmark

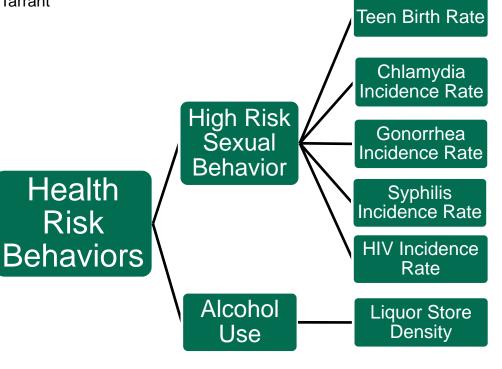


- Worse than the benchmark

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

Health

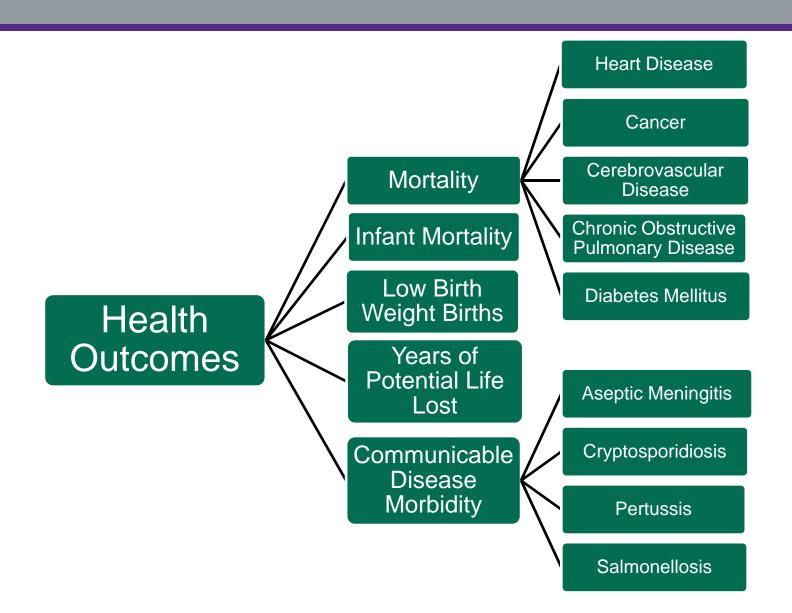
Risk



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

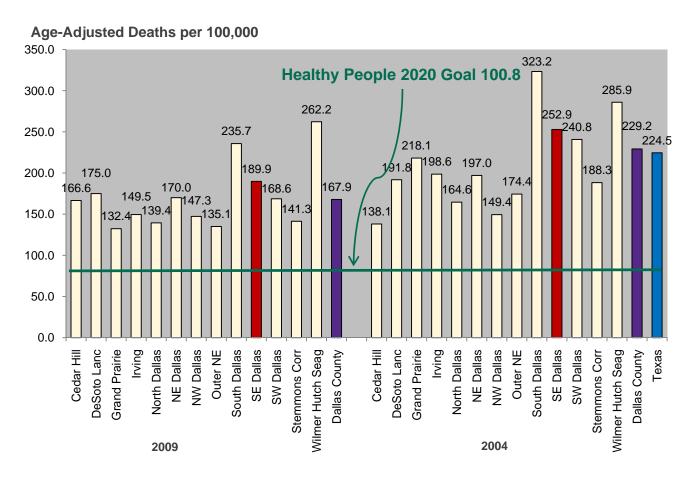


### **Health Outcomes**

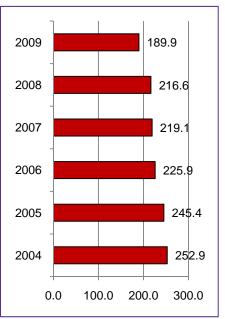




# **Health Outcomes: Heart Disease Mortality Rates**



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

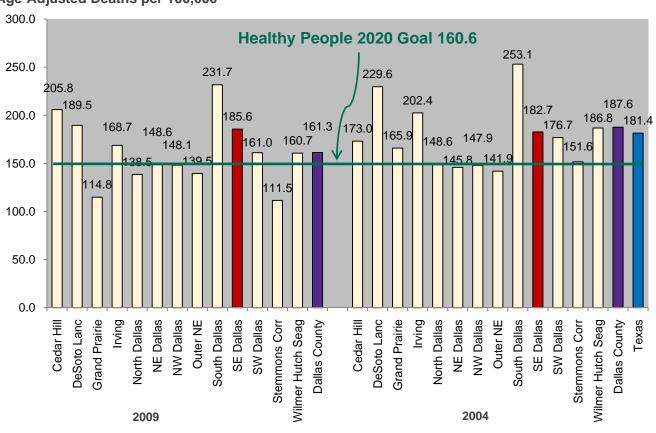




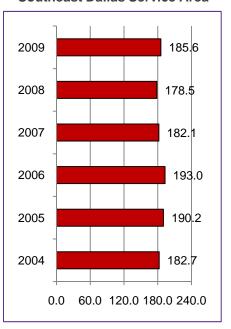
# Health Outcomes: Cancer Mortality Rates

Southeast Dallas Service Area

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



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

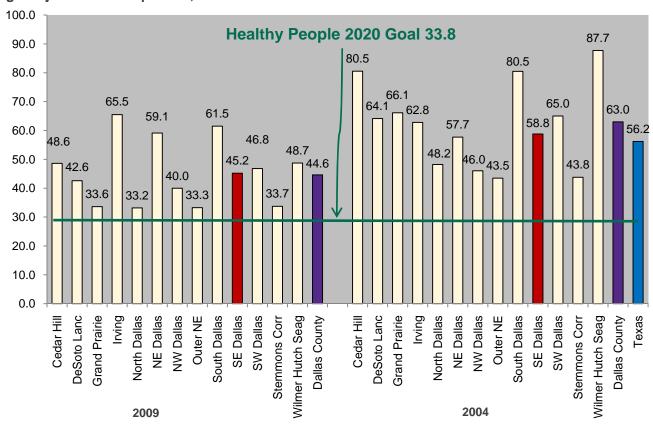




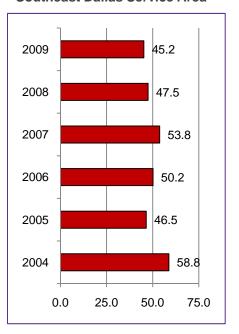
## Health Outcomes: Cerebrovascular Disease Mortality Rates

Southeast Dallas Service Area





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

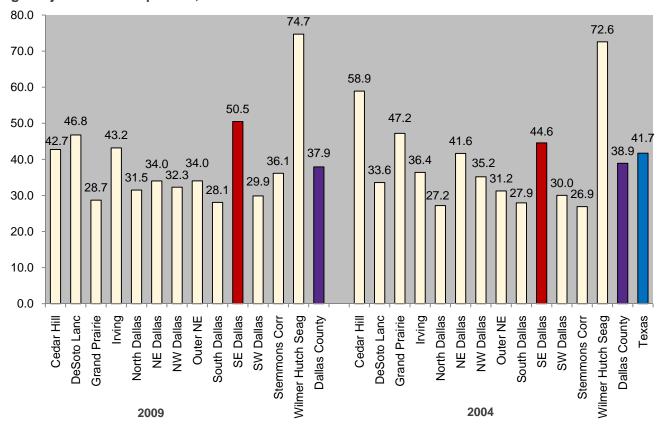




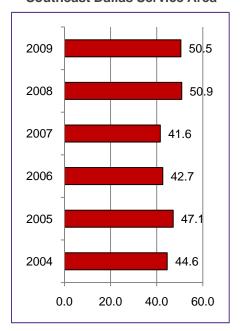
### Health Outcomes: Chronic Obstructive Pulmonary Disease Mortality Rates

Southeast Dallas Service Area

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



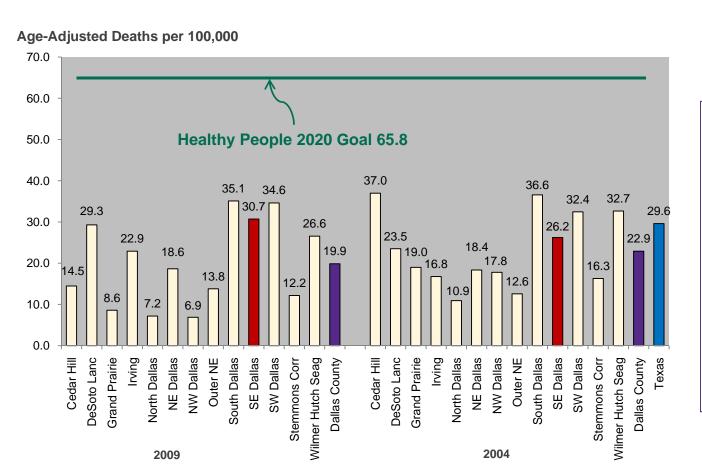
Chronic Obstructive Pulmonary Disease Mortality Rate, Age-Adjusted Death Rate per 100,000, Southeast Dallas Service Area



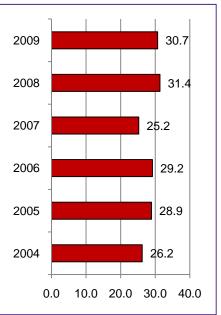
NOTE: No Healthy People 2020 goal matches this metric.



# **Health Outcomes: Diabetes Mortality Rates**



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



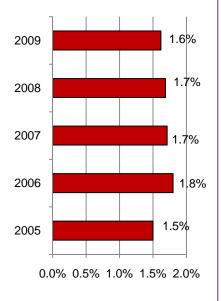


# Health Outcomes: Birth Outcomes, Rate of Very Low Birth Weight Births

Southeast Dallas Service Area

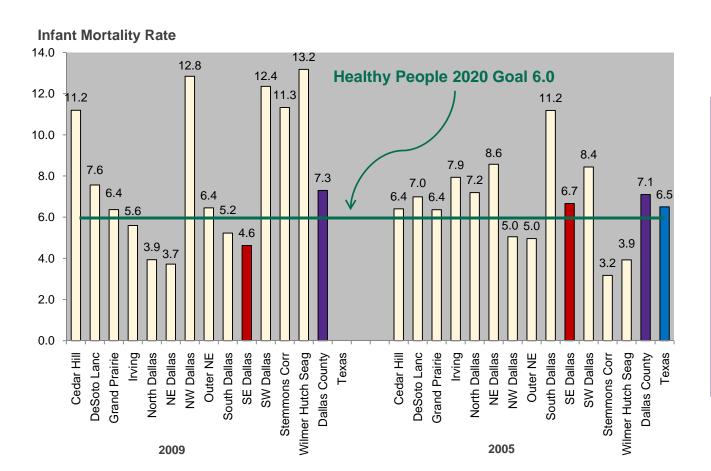


Very Low Birth Weight Rate, % of Births Below 1500 Grams at Birth, Southeast Dallas Service Area

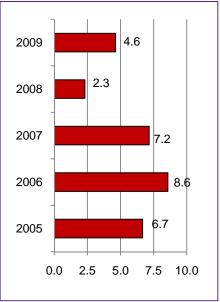




### Health Outcomes: Birth Outcomes, Infant Mortality Rate



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

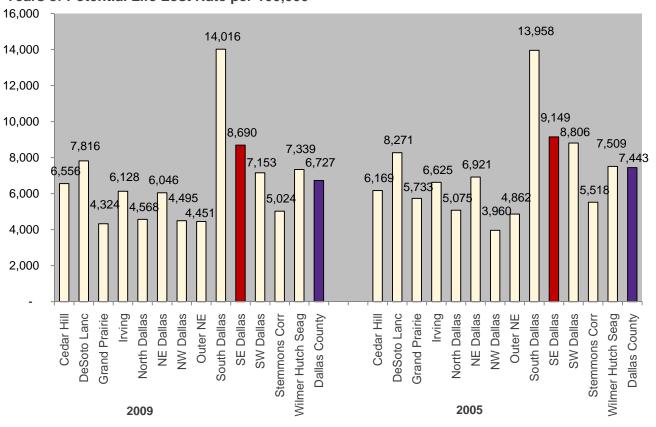




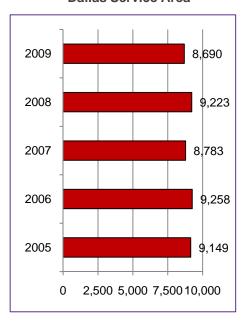
# Health Outcomes: Years of Potential Life Lost, All Causes

Southeast Dallas Service Area





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

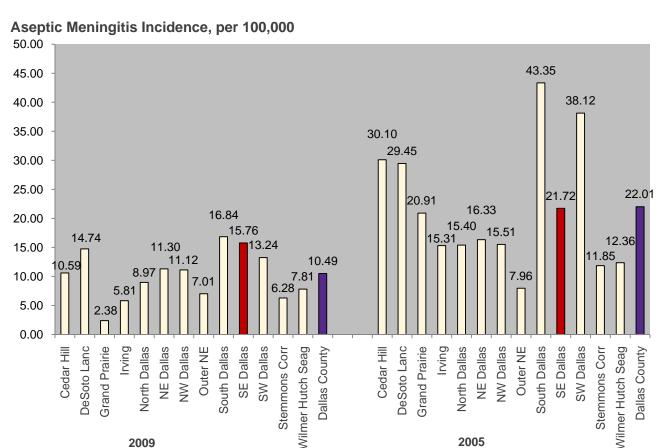


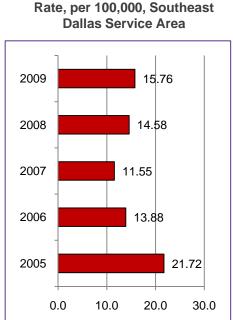
\*Years of Potential Life Lost Rate is defined as the rate of deaths under age 75 per 100,000 population under age 75.



# Health Outcomes: Reportable Communicable Disease Rates

Southeast Dallas Service Area





**Aseptic Meningitis Incidence** 

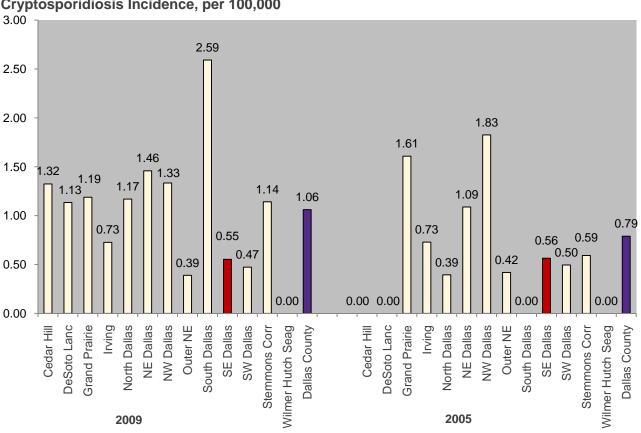
Source: Texas Department of State Health Services, Infectious Disease Control Unit, unpublished data; denominator population data from Claritas, Inc.; 2005 Dallas County data from Dallas County Health and Human Services web site: <a href="http://www.dallascounty.org/department/hhservices/services/communicable/documents/ReportableConditions2003-07Annual.pdf">http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



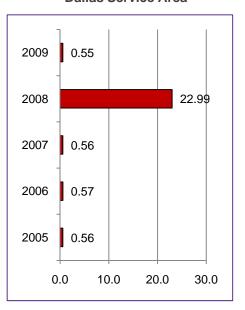
### Health Outcomes: Reportable **Communicable Disease Rates**

Southeast Dallas Service Area





#### **Cryptosporidiosis Incidence** Rate, per 100,000, Southeast **Dallas Service Area**

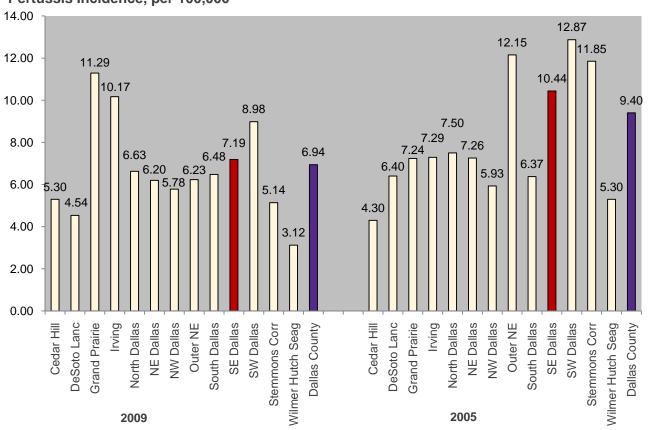




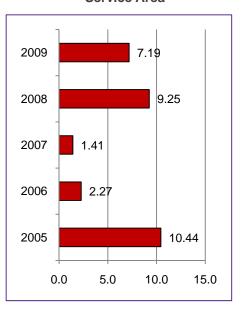
### Health Outcomes: Reportable Communicable Disease Rates

Southeast Dallas Service Area





#### Pertussis Incidence Rate, per 100,000, Southeast Dallas Service Area

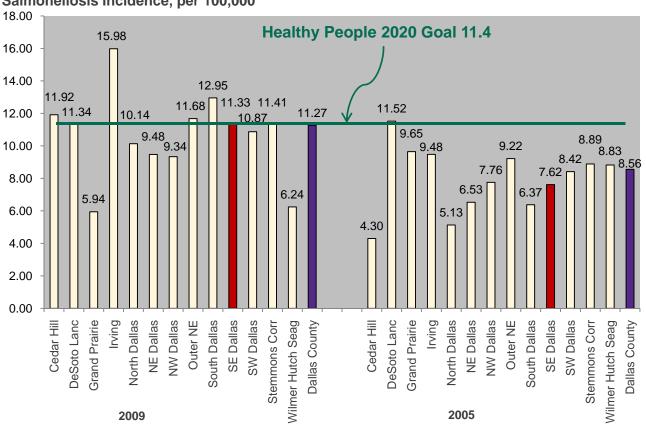




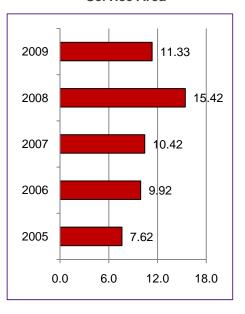
# Health Outcomes: Reportable Communicable Disease Rates

Southeast Dallas Service Area





#### Salmonellosis Incidence Rate, per 100,000, Southeast Dallas Service Area

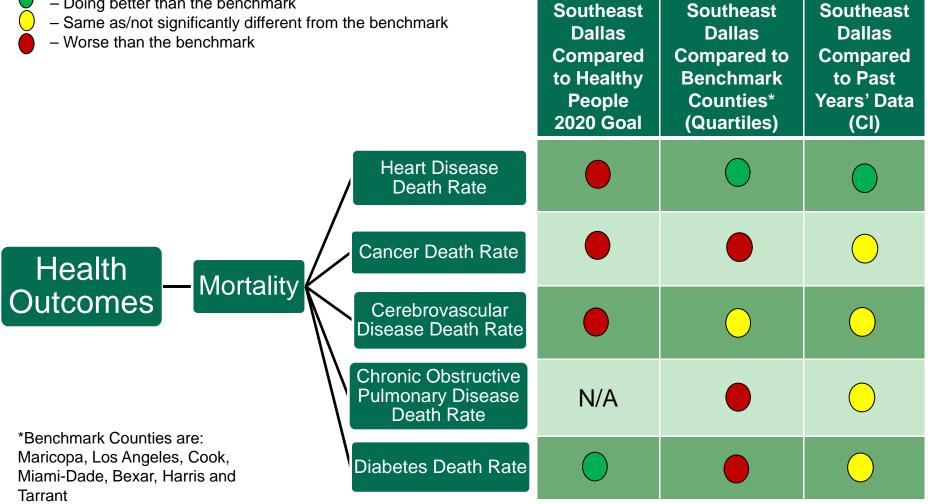




#### **Health Outcomes**

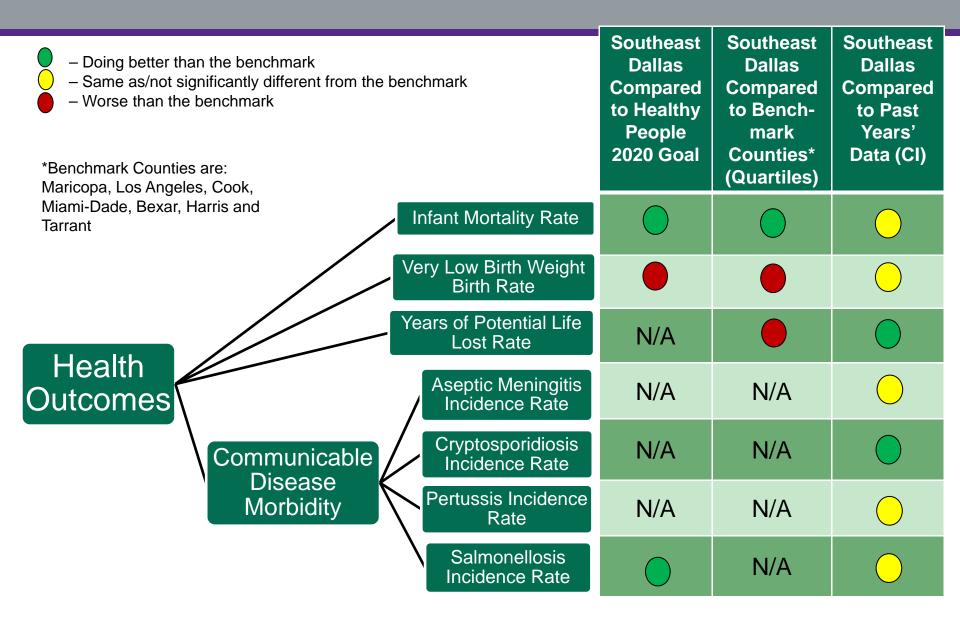


- Doing better than the benchmark



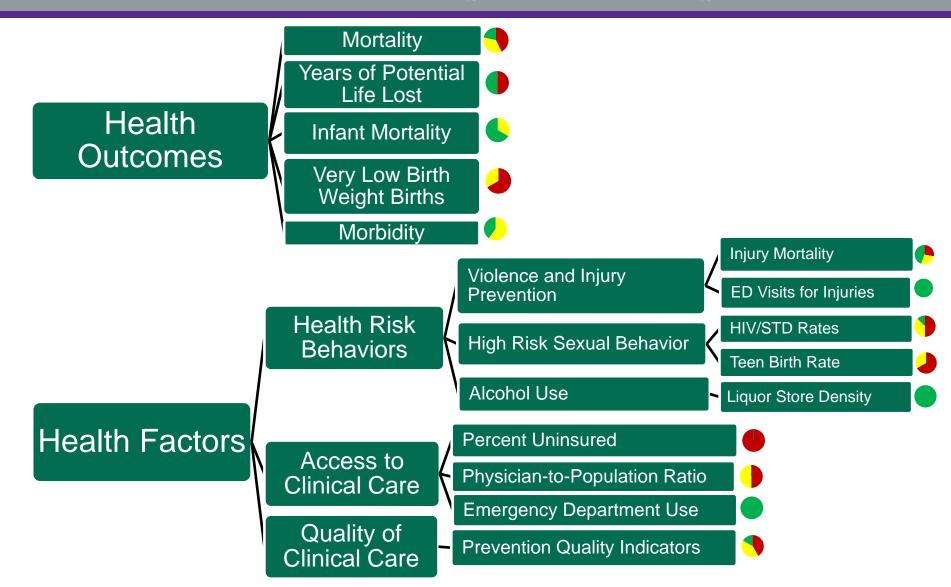


#### **Health Outcomes**

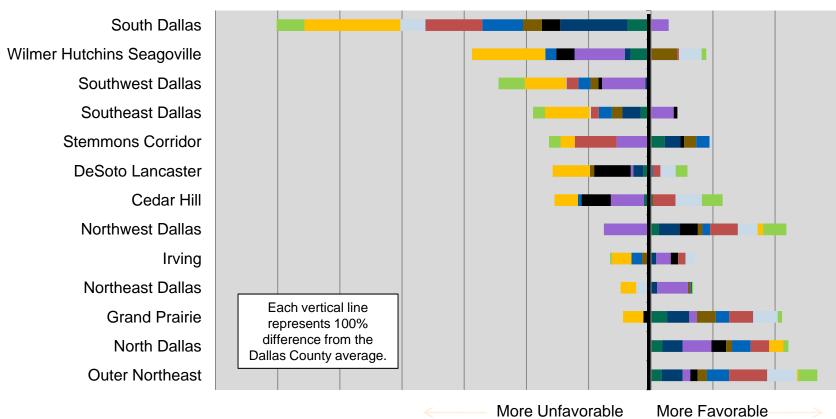




### Summary – Model With Stoplight Pie Charts, Southeast Dallas Service Area



### Parkland Deviations from the Dallas County mean



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

#### Percent Difference from the Dallas County Average

- Mortality
- Very Low Birth Weight
- High Risk Sexual Behavior
- Socioeconomic

- Years of Potential Life Lost
- Morbidity
- Access to Clinical Care

- Infant Mortality
- Violence and Injury
- Preventable Hospitalizations



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

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



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

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





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.