South Central Partnership
Regional Health Assessment

Counties

• Anson
• Bladen
• Cumberland
• Harnett
• Hoke
• Lee
• Montgomery
• Moore
• Randolph
• Richmond
• Robeson
• Sampson
• Scotland

Data: Sources and Indicators

• County Health Data Book to provide communities with quantitative data to support community health assessments. (NC State Center for Health Statistics)
  – Pregnancy and Live Births
    • Pregnancies by County, 2010 (Word Document – 13.7MB)
    • Pregnancy Rates per 1,000 Population for Girls Ages 15-17, by Race/Ethnicity, 2006-2010
    • 2010 Pregnancy, Fertility, and Abortion Rates per 1,000 Population, by Race/Ethnicity for Females 15-19 and 15-44
    • Live Birth Rates per 1,000 Population, 2006-2010
    • 2006-2010 Number At Risk NC Live Births due to High Parity by County of Residence Age of Mother Under 30 and Age of Mother 30 or More
    • 2006-2010 NC Live Births by County of Residence; Number with Interval from Last Delivery to Conception of Six Months or Less
    • Low (<2500 grams) and Very Low (<1500 grams) Weight Births by Race/Ethnicity, 2006-2010
    • Births Delivered by Cesarean Section, 2006-2010
  – NC Health Data Query System — Mortality Data
Rather than refer to existing CHA’s and SOTCHES, reference State Center information because it is more consistent in the way it is calculated across counties and because it is more current than many CHA’s, using 2010 totals.

### Data: Sources and Indicators

- **Mortality**
  - Fetal Death Rates per 1000 Deliveries, 2006-2010
  - Neonatal (<28 Days) Death Rates per 1000 Live Births, 2006-2010
  - Postneonatal (28 Days - 1 Year) Death Rates per 1000 Live Births, 2006-2010
  - Infant Death Rates per 1,000 Live Births by Race/Ethnicity, 2006-2010
  - Unadjusted Death Rates per 100,000 Population, 2010 and 2006-2010
  - Death Counts and Crude Death Rates per 100,000 Population for Leading Causes of Death, by Age Groups NC 2006-2010 2006-2010 Race-Specific Age-Adjusted Death Rates by County (2006-2010 Race-Specific and Sex-Specific Age-Adjusted Death Rates by Race Group)

- **Morbidity**
  - Gonorrhea Cases and Rates per 100,000 Population, 2005-2009
  - Primary and Secondary Syphilis Cases and Rates per 100,000 Population, 2005-2009
  - 2005-2009 NC Cancer Incidence Rates per 100,000 Population Age-Adjusted to the 2000 US Population Inpatient Hospital Utilization and Charges by Principal Diagnosis, and County of Residence.
  - NC 2010 Asthma Hospital Discharges (Total and Ages 0-14) per 100,000 Population, 2010

Note: for pregnancy and birth related indicators the rate is number per 1000 and for chronic and communicable disease the rate is number per 100,000

### Analysis: Indicators

- **Chronic Disease and Unintentional Deaths Indicators**
- **Communicable Diseases Indicators**
- **Mother and Child Indicators**
Analysis: Questions of Interest

• Which diseases/public health conditions are most important to the South Central counties?
• Which of these are most commonly shared as important conditions by South Central counties?
• Which public health conditions/indicators are very important to one or a few counties but are not important to most counties (i.e. which counties are outliers for specific diseases/public health conditions?)

Chronic Diseases and Injuries

South Central Chronic Disease Death Rates

Ave. Death Rates
Have cancer collapsed together and split out into the most common cancers. All are among the top ten. COPD is among the top five and we don’t typically talk about this too much in public health. Heart Disease and cancer are far and away the most common sources of death.

Is this what you expect? Is the difference between the first two and the others more dramatic than you expected?

Compare to state average, see dramatic variance
Note the range rom the county with the lowest incidence of heart disease to the highest is 185 cases per 100k, which is greater than the state average incidence of 179; SC average is 210, Richmond is 289, Bladen and Lee about 250. Key point this is the most important disease for most SC counties.

Would you expect the SC rate to be relatively so high? Why? How would you explain the difference between Hoke or Cumberland and Richmond?
10 of 13 counties are at or above the state average. State average incidence of 179; SC average is 210

**Key Points: Heart Disease**

- Clearly heart disease is one of two major sources of mortality in the South Central Partnership counties
- There is considerable variation in the prevalence of death from heart disease from the counties with the highest and lowest rates
- Nearly two thirds of the SC counties have rates that exceed the NC average rate
- The shared importance of heart disease suggests that this would be priority target for the region
Split out cancers as most relatively most important, each requiring a different intervention (Colonoscopy and other screening,

**Digital rectal exam (DRE):** A doctor or nurse will insert a gloved, lubricated finger into the rectum to feel the prostate. This allows the examiner to estimate the size of the prostate and feel for any lumps or other abnormalities.

**Prostate specific antigen test (PSA):** The PSA test is a blood test that measures the level of PSA in the blood. PSA is a substance made by the prostate. The levels of PSA in the blood can be higher in men who have prostate cancer. The PSA level may also be elevated in other conditions that affect the prostate.

...at the most prevalent of the individual cancers in the SC Partnership, at least twice as common as the others.

The National Lung Screening Trial (NLST), a randomized national trial involving more than 53,000 current and former heavy smokers ages 55 to 74, compared the effects of two screening procedures for lung cancer -- low-dose helical computed tomography (CT) and standard chest X-ray -- on lung cancer mortality and found 20 percent fewer lung cancer deaths among trial participants screened with low-dose helical CT. The NLST was sponsored by NCI, a part of the National Institutes of Health, and conducted by the American College of Radiology Imaging Network (ACRIN) and the Lung Screening Study group to reduce deaths from lung cancer by detecting cancers at relatively early stages. Total of 354 deaths from lung cancer had occurred among participants in the CT arm of the study, whereas a significantly larger 442 lung cancer deaths had occurred among those in the chest X-ray group. The DSMB concluded that this 20.3 percent reduction in lung cancer mortality met the standard for statistical significance and recommended ending the study.
Lung cancer is by far the most common cancer across all counties, 9 of the 13 counties have higher rates of lung cancer than the state average.

Other cancers vary in importance by county, though breast cancer is second most common cancer for 9 of the 13 counties.

Prostrate cancer varies dramatically across counties, and Colon cancer shows the least variation, and is lowest among the 4 cancer in 10 of the 13 counties.

South Central counties on average exhibit higher rates of cancer deaths than other NC counties do on average for all cancers, and the difference is highest for lung cancer.
Key point, all cancers deaths are materially higher in the SC Partnership than in the state overall, but prostrate and lung cancer averageds are roughly 20% higher than state averages.

Key Points: Cancer

• Clearly cancer is one of two major sources of mortality in the South Central Partnership counties
• Lung cancer is the single most common cancer in the South Central counties, over twice as common as the next most common, breast cancer.
• The South Central average death rates for all the most common cancers exceed the NC averages, about 20% higher for lung and prostrate cancer.
Use state average as a benchmark, not particularly high benchmark, against which to determine whether respective chronic diseases should be targeted with prevention activities. (See a pattern?)

Key point, for every disease but Alzheimer’s the South Central rates are higher than the state rates. Alzheimer’s is essentially the same. The South Central region is a relatively sick part of the state.

MV and diabetes are show the greatest variation, over 80% for MV and about 35% difference for diabetes. Would you have expected this?
Motor Vehicle Death Rate by South Central County

Note: Cumberland is the only SC county near the state average, all other are higher, with six counties having at least double the state’s rate. Any comments on why this would be the pattern? Would this be a public health priority?

Indicates that MV would be a priority public health condition on which to focus as a region

Diabetes Death Rate by South Central County

Note: Lee and Moore counties, the only SC counties near the state average, all other are higher, with four counties having at least double the state’s rate. Should this be a public health priority? See a break, 9 counties with a rate between 20 and 30 and four counties with a rate between 40 and 60.

Indicates that Diabetes would be a priority chronic disease on which to focus
Again we see that for all chronic diseases/MV the South Central average is greater than the state average. Ask health department staff if they can explain outliers for their counties? SC average and outlier value, add numbers to the charts, organize the charts from largest to smallest outliers

### Key Points

- Counties in the South Central Partnership exhibit average death rates across virtually all chronic diseases that exceed state averages.
- Motor vehicle and diabetes deaths in particular for the South Central partnership counties exceed NC averages substantially.
- Several South Central counties exhibit very high death rates for selected diseases.
Only Cirrhosis among the chronic diseases, exhibits a lower death rate than do any of these communicable diseases, any thoughts on why these rates are lower? Possibly suggesting that control via immunizations, the application of antibiotics, and prevention efforts regarding AIDS have been very effective.

Variation in average death rates across communicable diseases relative to the state average; however, the what is striking is how large the range and variation is across counties for HIV, Flu/Pneumonia. Septicemia rates are relatively comparable except for one outlier, Anson.
The SC counties range from 0 to 9 HIV death, with Richmond the highest at about 8.5 and Lee, Montgomery, and Cumberland at about 7, trailing off to zero. Any programs or other interventions that might be making a difference?

The apparent variation across counties appears striking, given the HIV rates; however, the small number of no more than 9 deaths makes even small variations appear large.

Dramatic difference across counties from a rate of about 33 in Montgomery to about 3 in Scotland county. See NC is about in the middle of the pack with its death rate. Any factors that we might consider in explaining this difference, any reason to prioritize this disease re: immunizations, etc.?
This is the one communicable disease that’s higher for the region than the state. See where NC average is. Access to healthcare an issue here? Not getting help before the infection is too far gone.

Note the scales, low incidence of Syphilis. What’s striking is the ave. STD rate vs the ave. minority STD rate. What STD prevention activities/programs are currently in place in your LHDs? Are they intentionally targeted to minorities?
High minority incidence leads to higher overall incidence. While all counties exhibit materially higher minority Syphilis incidence, this difference varies dramatically from county to county. Are there any demographic or intervention related factors that might explain this variation?

High minority incidence leads to higher overall incidence. While all counties exhibit materially higher minority Syphilis incidence, this difference varies dramatically from county to county. Are there any demographic or intervention related factors that might explain this variation? Go to next slide comparing the two.
Scales are different, but histogram bars can be used to see which of the counties exhibit relatively low and high rates for each of the STD’s. Check your county and see if the two track. Overall the two do seem to track one another. What does this mean regarding possible interventions if anything?

Key Points: Communicable Diseases

• Overall, their regional incidence does not vary considerably from statewide averages
• There is considerable variability in STD rates/incidence of across counties
• Minority STD rates/incidence are dramatically higher than are overall rates
• Counties with relatively high Syphilis rates also tend to exhibit high Gonorrhea rates
Pregnancy and Related Indicators

Total Pregnancy Rates by South Central Counties

The pregnancy rates are pretty stable across SC counties, averaging about 80 pregnancy per 1000 people.
Total Pregnancy Rates by Ethnic Groups & South Central Counties

Once again for many counties we see dramatic differences between white and minority rates across many counties, but it is interesting to note that Hispanic rates are well below the white, black and other minority rates in Scotland county. Also that the white rate is higher than other ethic groups in Hoke county? Any thoughts on why this is the case? Thoughts on who “other ethnic group” is?

Total Births & Pregnancies by South Central Counties

Overall similar difference in the respective rates across the SC counties, though proportionately higher difference in the rates for Cumberland county. See following slide.
Very consistent across counties except Cumberland. Why?

Ethnic minorities exhibit much higher prenatal death rates; however, different ethnic groups’ rates vary dramatically by county. “Other” is relatively very high in Moore and Randolph counties. Why? Why does Robeson with larger “other” ethnic group have lower death rate? The Hispanic ethnic minority is consistently much lower than whites, in six of the thirteen counties? Why would this minority exhibit such a different rate?
Again considerable variation across ethnic group rates by county. Minorities experience considerably higher infant death rate. Reasons for these patterns? Implications regarding possible interventions?

Total abortions across the region was 3,510 for 2010.
The larger number of abortions in Cumberland are partly the result of the larger population but also appears to stem from the fact that there is also a higher rate. Thoughts?

Abortion rates for Black and Other minorities are consistently and dramatically relatively higher than they are for Hispanics and Whites.
Key Points: Pregnancy and Related Indicators

• Pregnancy rates across counties are relatively stable, averaging about 70 per thousand
• Pregnancy rates vary dramatically across ethnic groups with Hispanics consistently exhibiting the highest pregnancy rates
• Infant and prenatal deaths vary dramatically by ethnic minorities by county
• Abortion rates for Black and Other minorities are consistently and dramatically relatively higher than they are for Hispanics and Whites