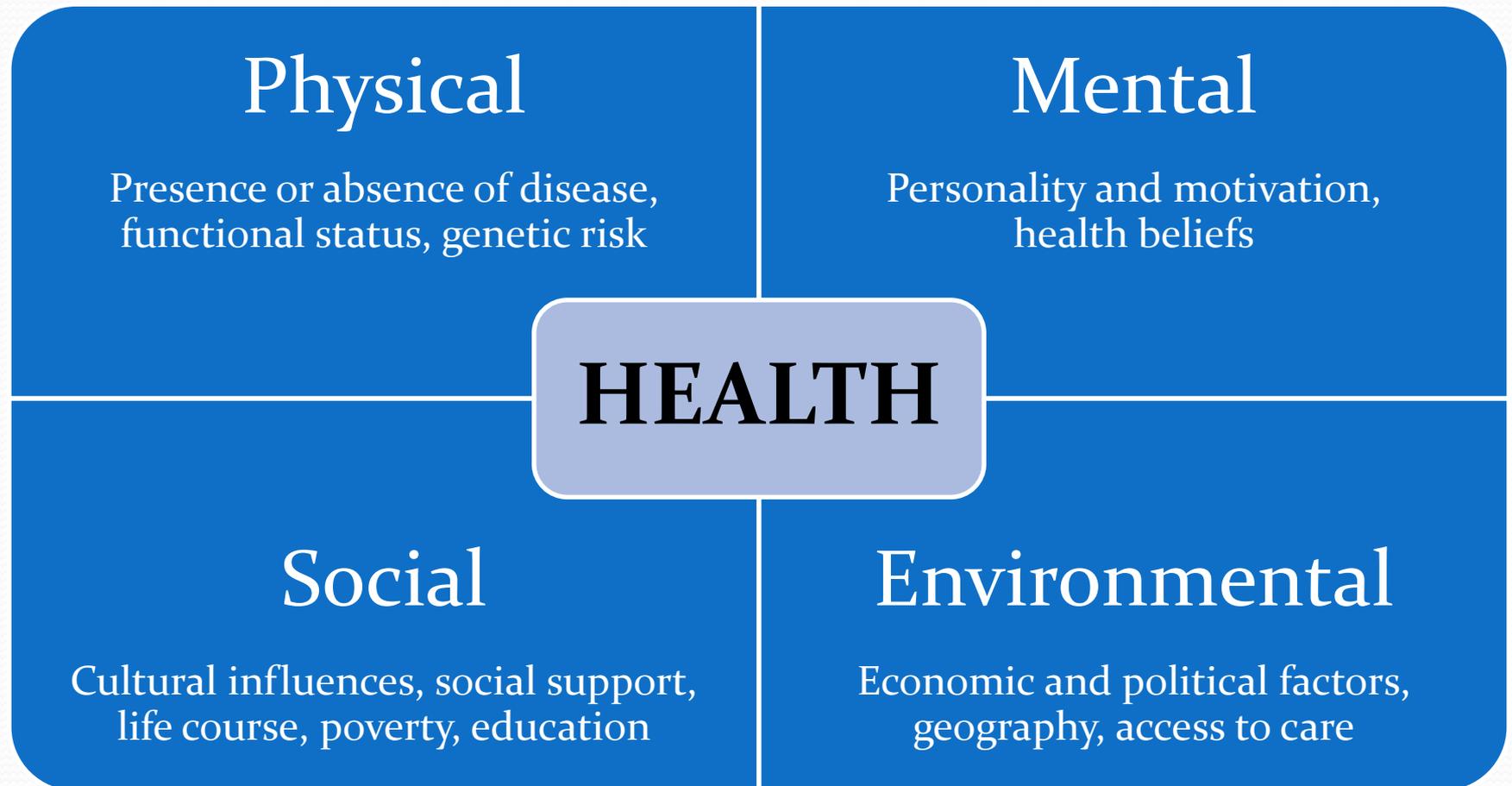


South Carolina Birth Outcomes Initiative Health Disparities Workgroup

Defining the scope of the problem
and identifying promising practices
to reduce racial disparities
in the rates of low birth weight

What is health?



What is a disparity?

Difference refers to a lack of identity or a degree of unlikeness



Disparity implies inequality, often where a greater equality might reasonably be expected

Rate of very LBW in SC Resident Births, 2009

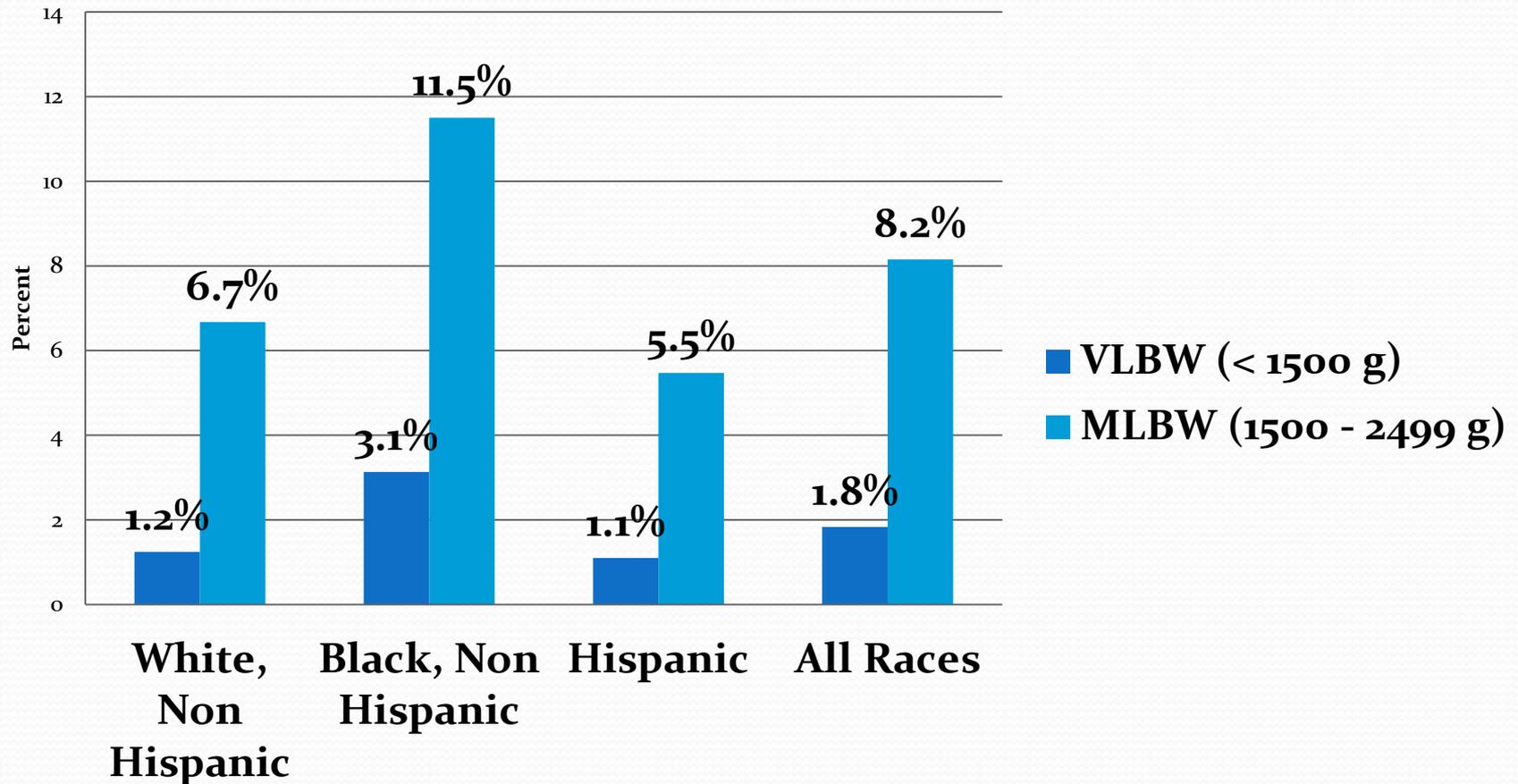
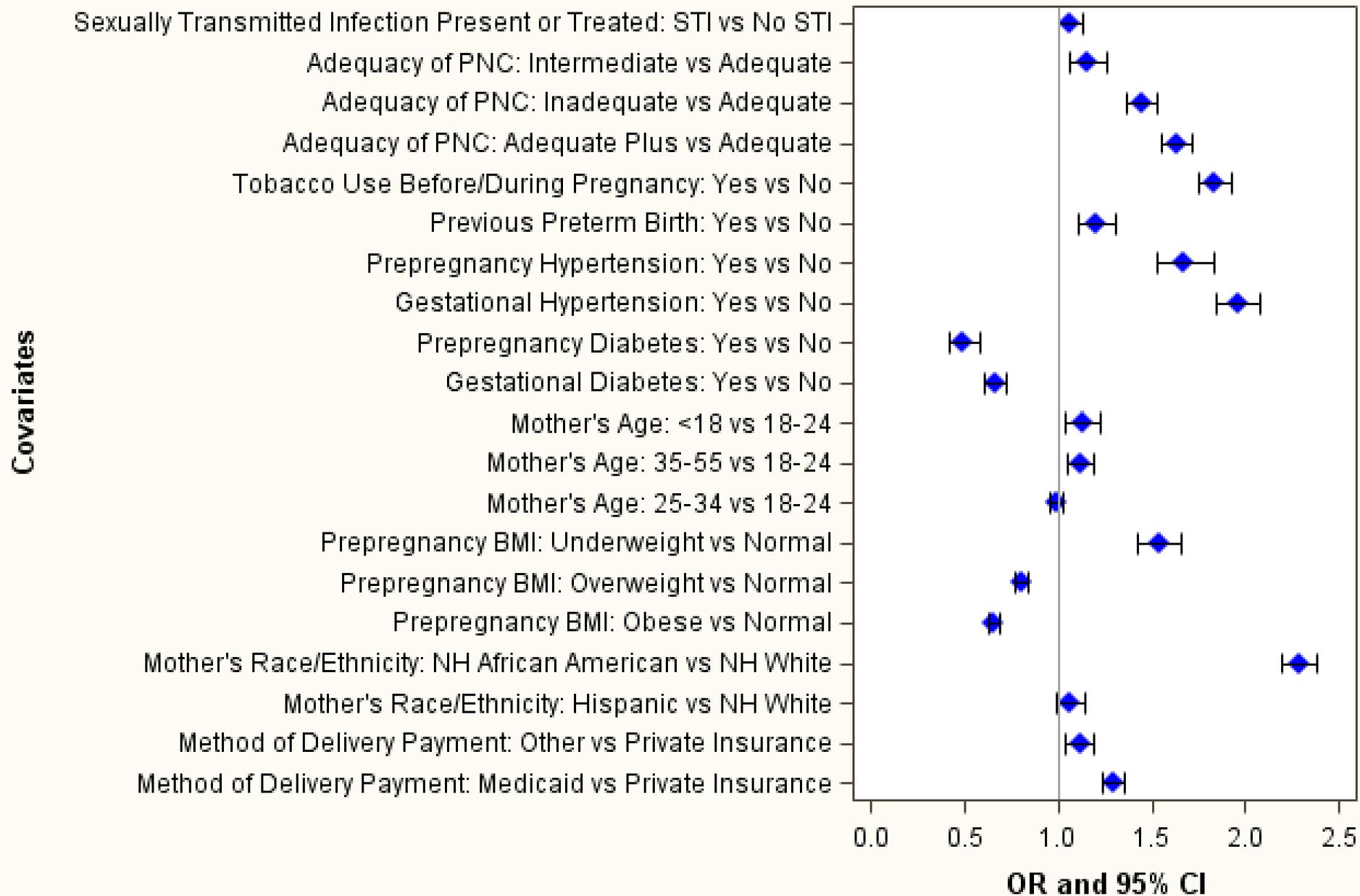
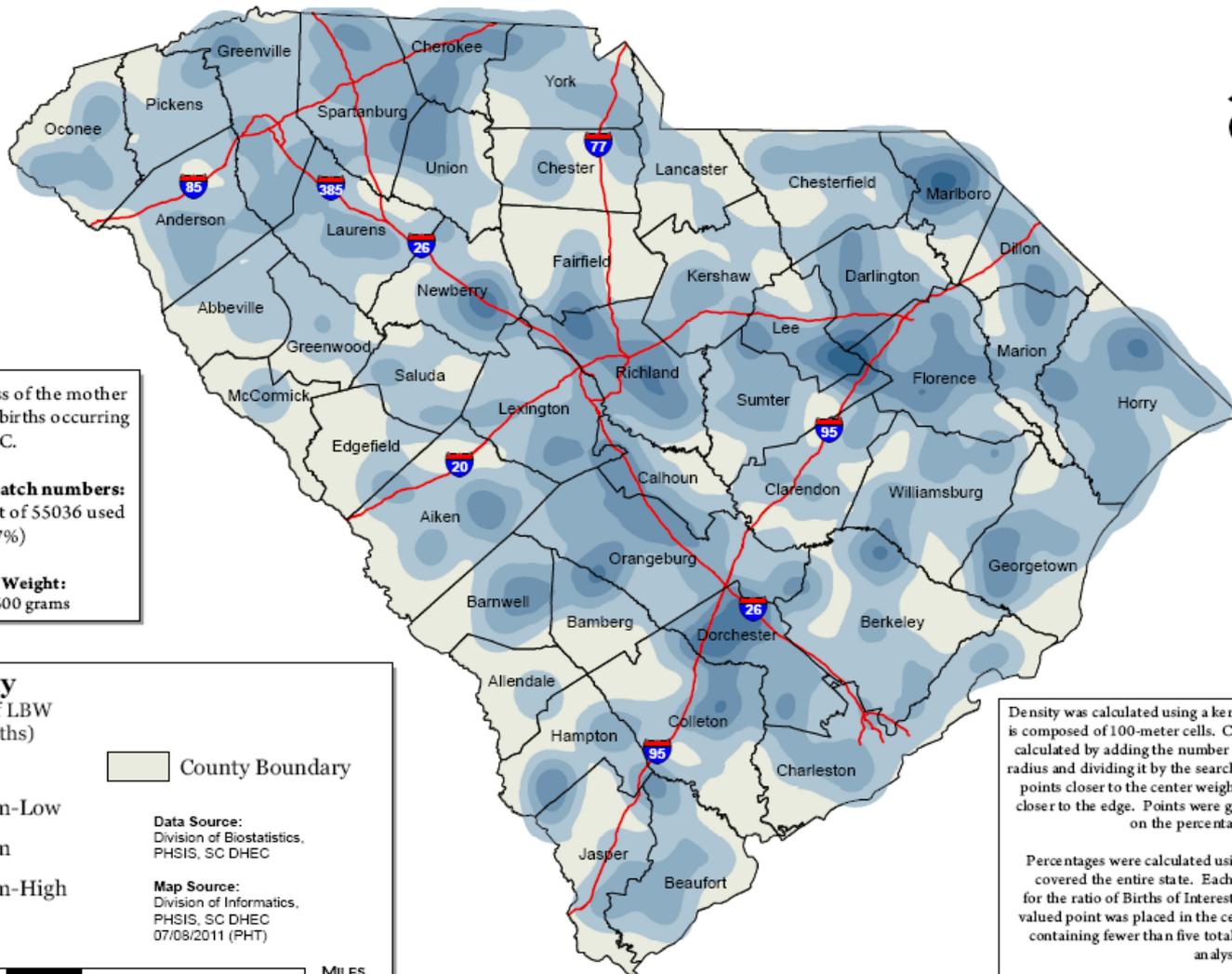


Figure 2a: Adjusted odds ratios and 95% confidence intervals comparing LBW deliveries to NBW deliveries. All races, 2005-2010 SC residents.



Percentage of births in SC resulting in LBW, 2010



Residence address of the mother was geocoded for births occurring in SC.

Exact address match numbers:
 Births: 51591 out of 55036 used
 (93.7%)

Low Birth Weight:
 less than 2500 grams

Density
 (Percentage of LBW out of all births)

	Low		County Boundary
	Medium-Low		
	Medium		
	Medium-High		
	High		

Data Source:
 Division of Biostatistics,
 PHSIS, SC DHEC

Map Source:
 Division of Informatics,
 PHSIS, SC DHEC
 07/08/2011 (PHT)

0 25 50 100 MILES

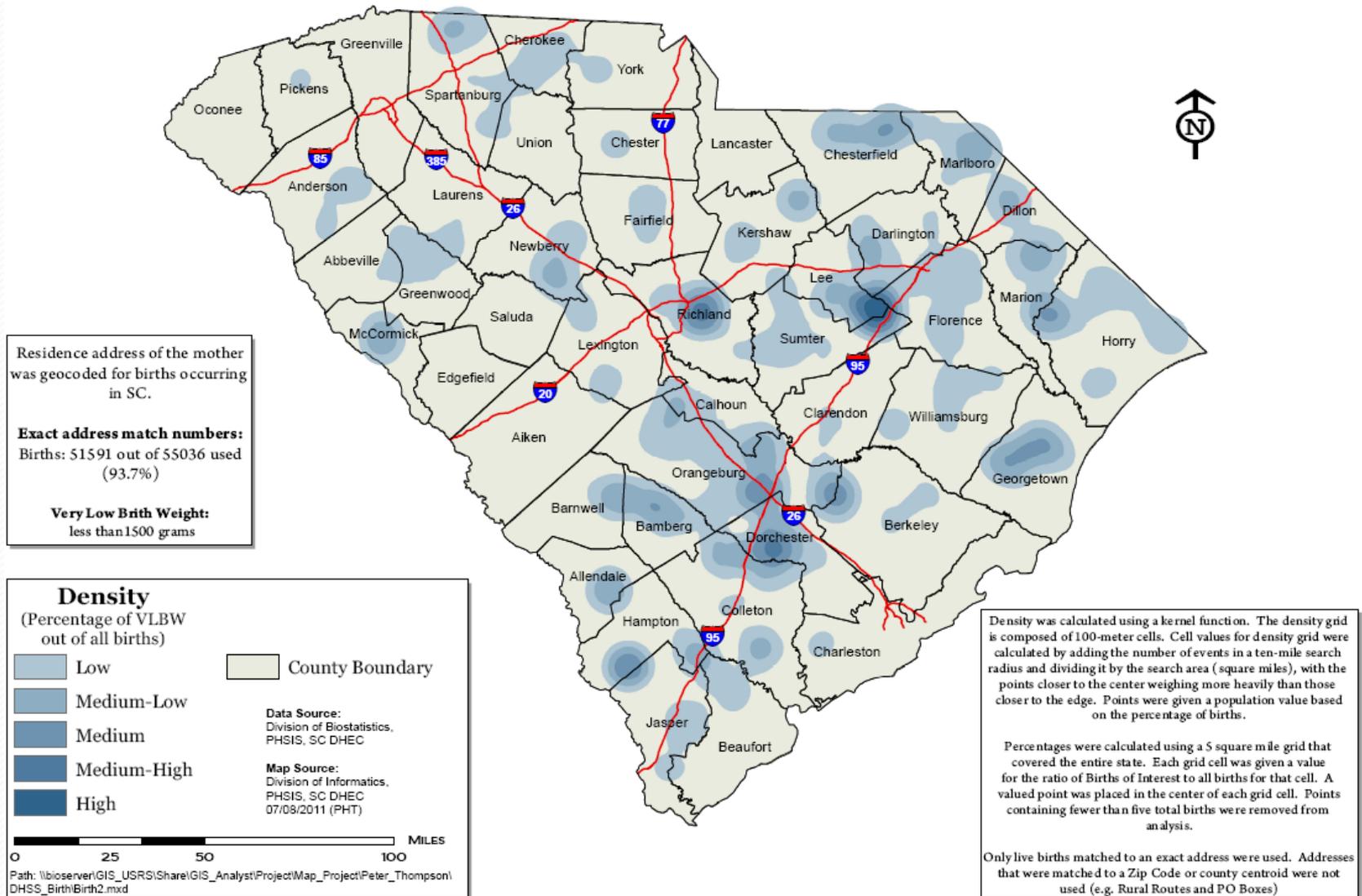
Path: \\bioserver\GIS_USRS\Share\GIS_Analyst\Project\Map_Project\Peter_Thompson\DHSS_Birth\Birth2.mxd

Density was calculated using a kernel function. The density grid is composed of 100-meter cells. Cell values for density grid were calculated by adding the number of events in a ten-mile search radius and dividing it by the search area (square miles), with the points closer to the center weighing more heavily than those closer to the edge. Points were given a population value based on the percentage of births.

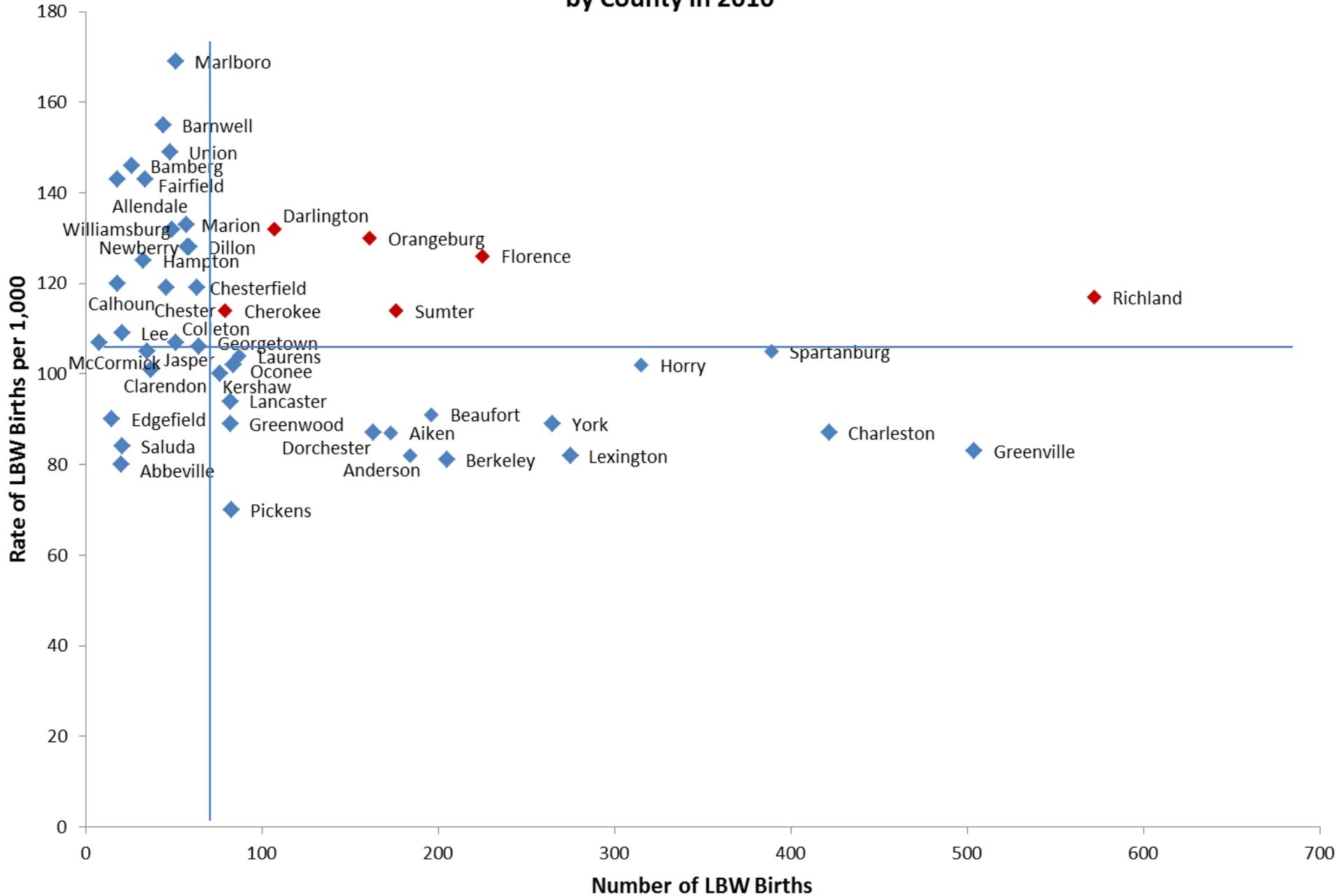
Percentages were calculated using a 5 square mile grid that covered the entire state. Each grid cell was given a value for the ratio of Births of interest to all births for that cell. A valued point was placed in the center of each grid cell. Points containing fewer than five total births were removed from an analysis.

Only live births matched to an exact address were used. Addresses that were matched to a Zip Code or county centroid were not used (e.g. Rural Routes and PO Boxes)

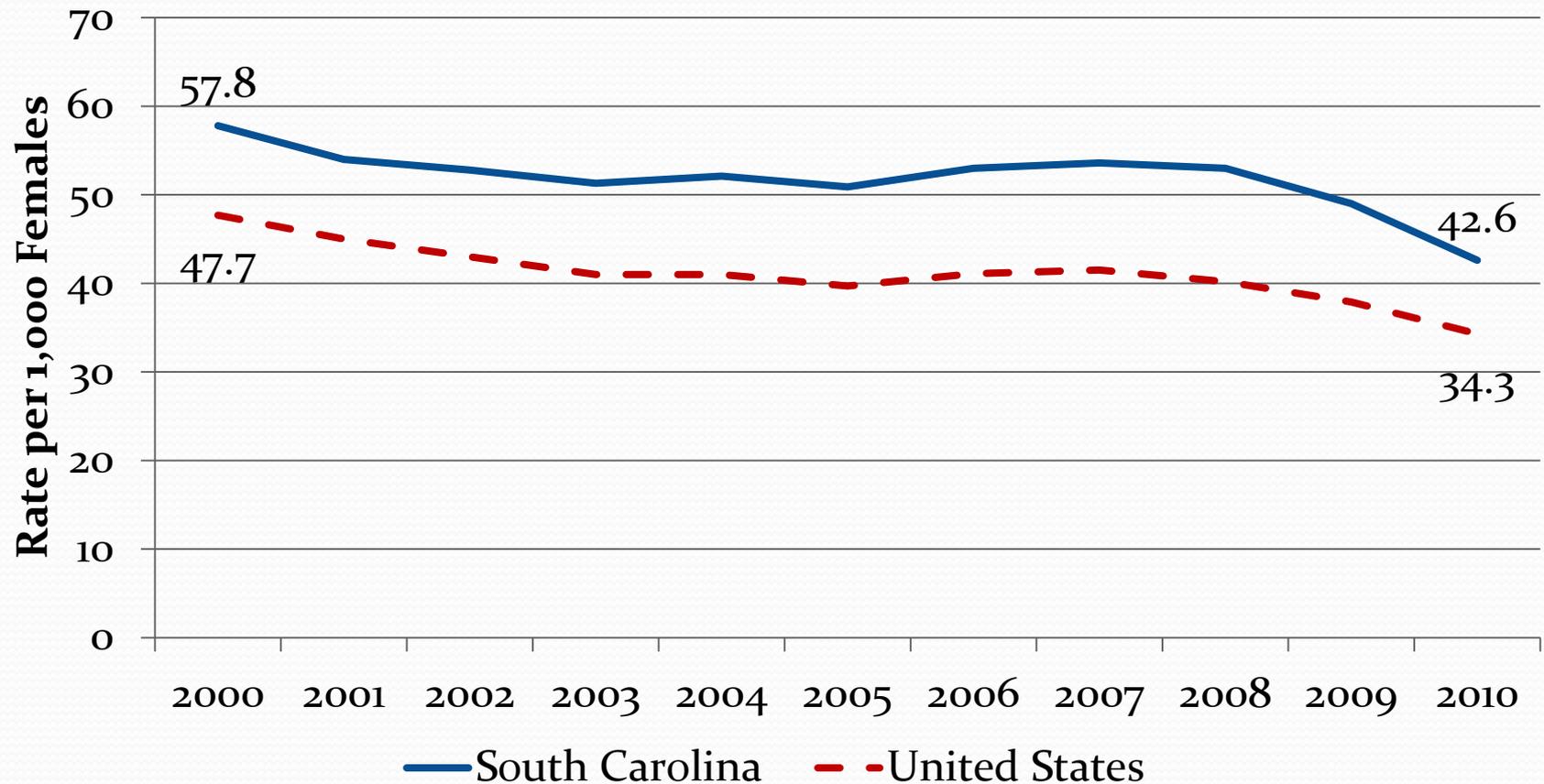
Percentage of births in SC resulting in VLBW, 2010



South Carolina LBW Number and Rate (per 1,000 live births) by County in 2010

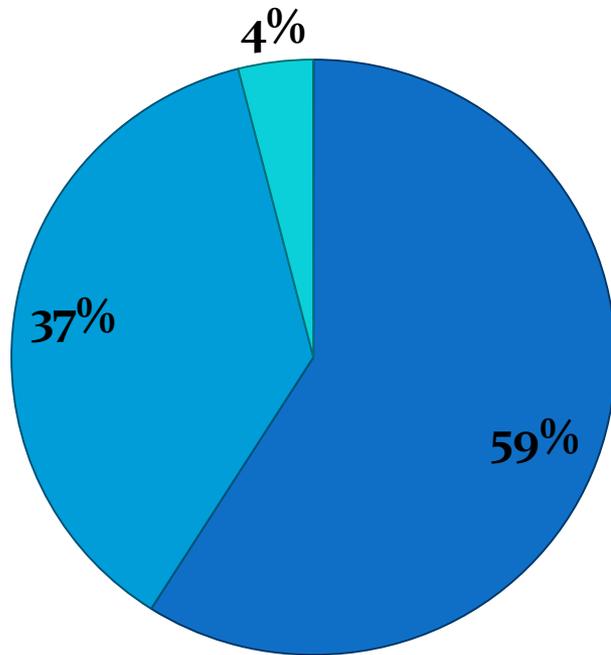


Teen birth rate females 15-19 years old, South Carolina and United States 2000-2009



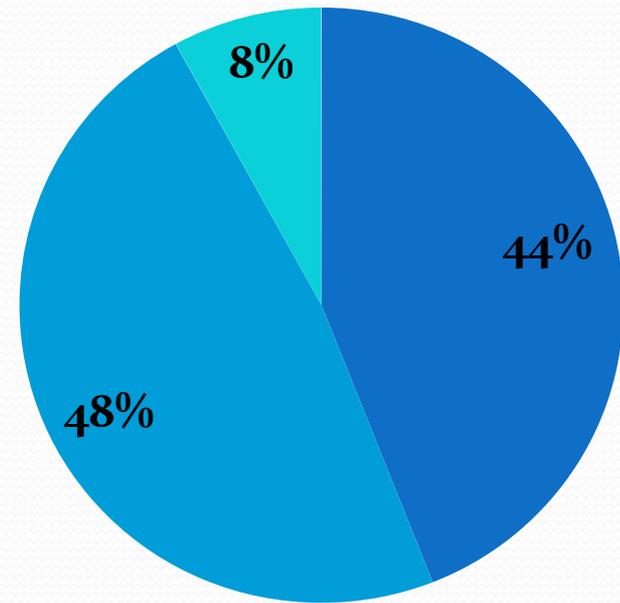
SC percent population 15-19 year old females by race/ethnicity

- White Non-Hispanic
- Black Non-Hispanic
- Hispanic



SC percent births to 15-19 year old females by race/ethnicity

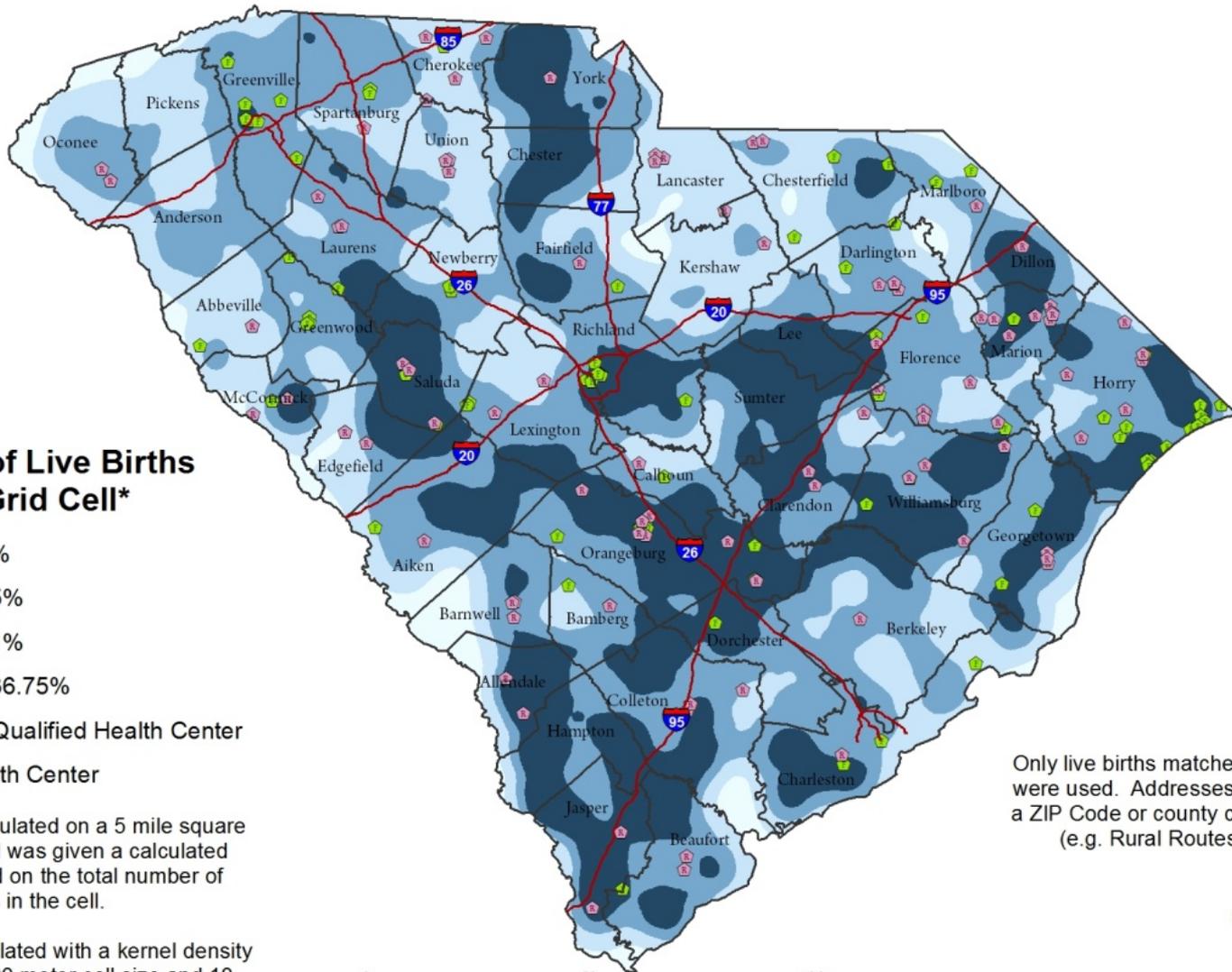
- White Non-Hispanic
- Black Non-Hispanic
- Hispanic



Adequacy of prenatal care utilization by mother's race/ethnicity, 2010 SC residents

Prenatal Care Utilization	Mother's Race/Ethnicity			χ^2 P-value
	White, Non-Hispanic	Black, Non-Hispanic	Hispanic	
Adequate Plus	47.8	46.2	29.0	
Adequate	33.0	23.5	25.8	
Intermediate	6.6	6.1	7.6	<0.001
Inadequate	12.6	24.2	37.6	
Total	100.0	100.0	100.0	

Percentage of Births with Inadequate Prenatal Care South Carolina 2008-2010



Percent of Live Births per Grid Cell*

- 0% - 5.75%
- 6% - 14.25%
- 14.5% - 21%
- 21.25% - 36.75%

- Federally Qualified Health Center
- Rural Health Center

*Percents were calculated on a 5 mile square grid, each grid cell was given a calculated percentage based on the total number of births in the cell.

Densities were calculated with a kernel density function using a 100 meter cell size and 10 mile search radius.

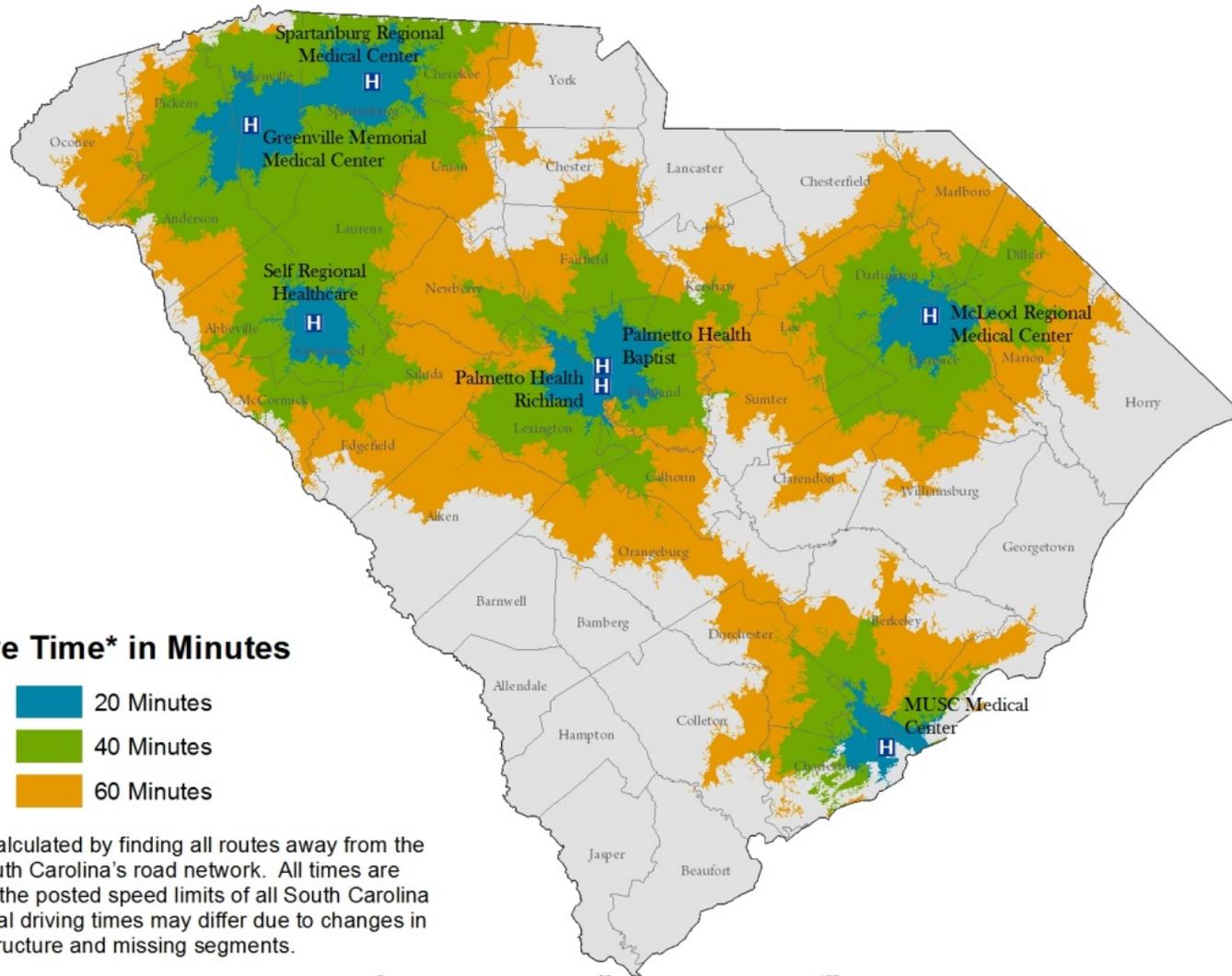
Only live births matched to an exact address were used. Addresses that were matched to a ZIP Code or county centroid were not used (e.g. Rural Routes and PO Boxes).



Data Source:
 Division of Biostatistics, PHSIS,
 SC DHEC

Map Source:
 Division of Informatics, PHSIS
 SC DHEC, 03/16/2012 (PHT)

Drive Times to Level III Hospitals South Carolina



Drive Time* in Minutes

- 20 Minutes
- 40 Minutes
- 60 Minutes

*Drive times were calculated by finding all routes away from the hospital along South Carolina's road network. All times are estimated based on the posted speed limits of all South Carolina passageways. Actual driving times may differ due to changes in infrastructure and missing segments.

Data Source:
 Division of Informatics,
 PHSIS, SC DHEC

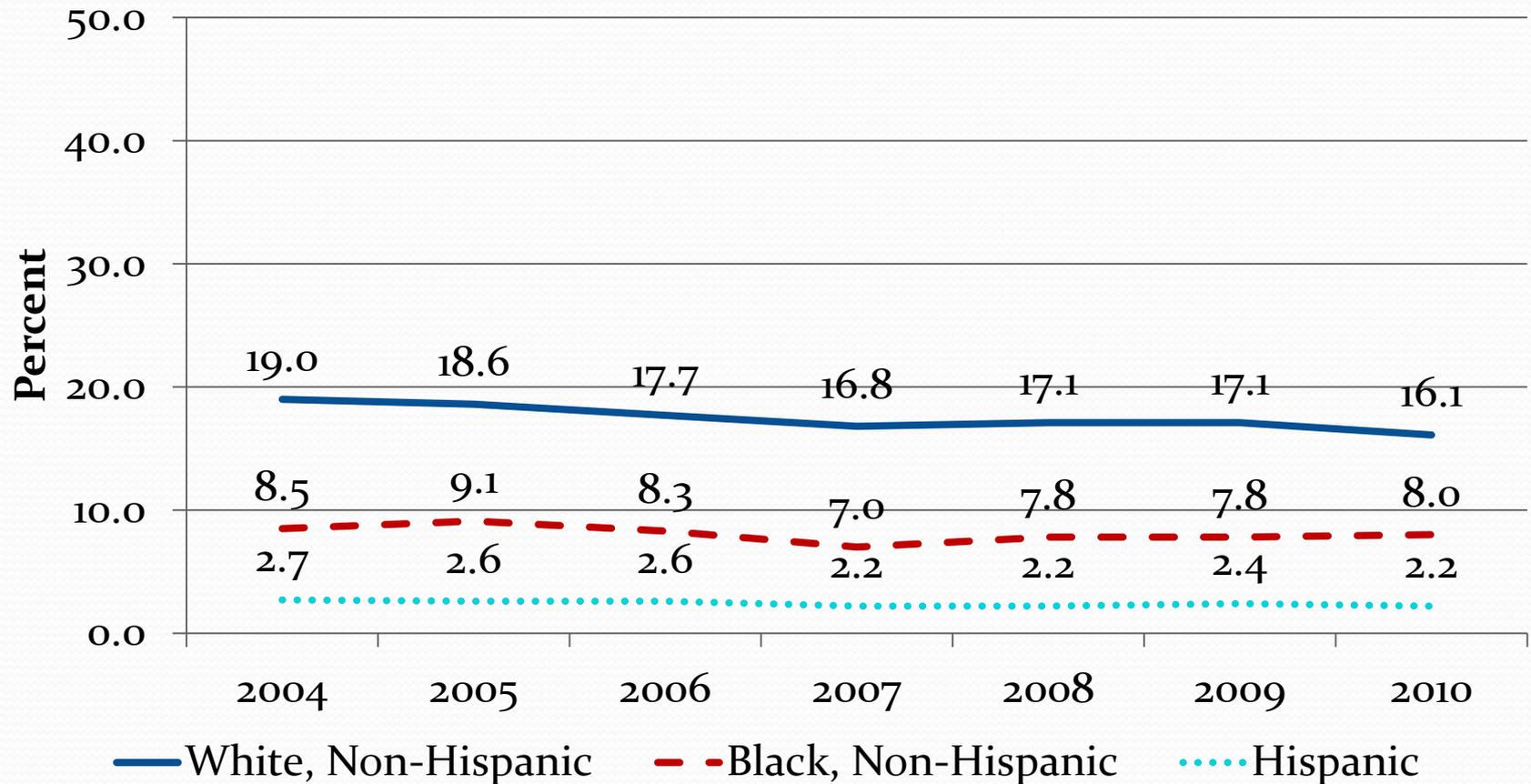
Map Source:
 Division of Informatics,
 PHSIS, SC DHEC
 03/13/2012 (PHT)

Family planning

SC DHEC FAMILY PLANNING CASELOAD BY COUNTY

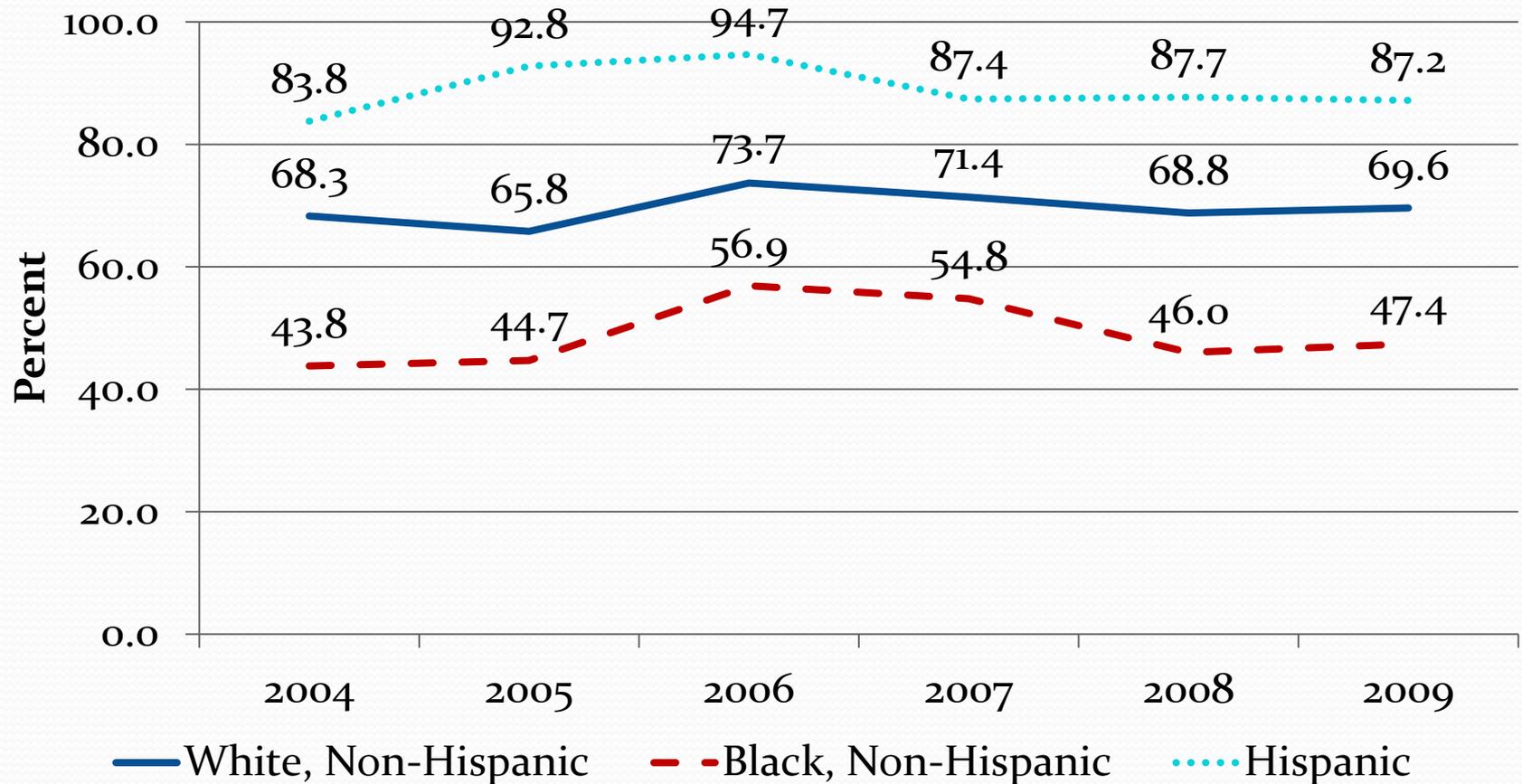
Year	2005	2006	2007	2008	2009	2010	2011	Percent Change
STATE TOTAL	102,369	97,987	94,916	92,374	99,136	92,860	90,252	-12%

Racial disparity in smoking during pregnancy, SC birth certificate data, 2004- 2010.

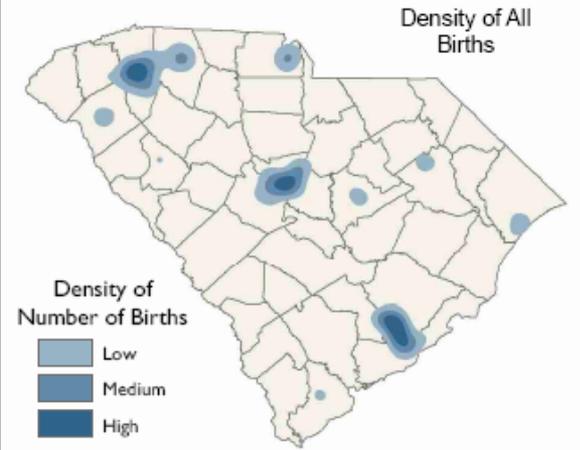
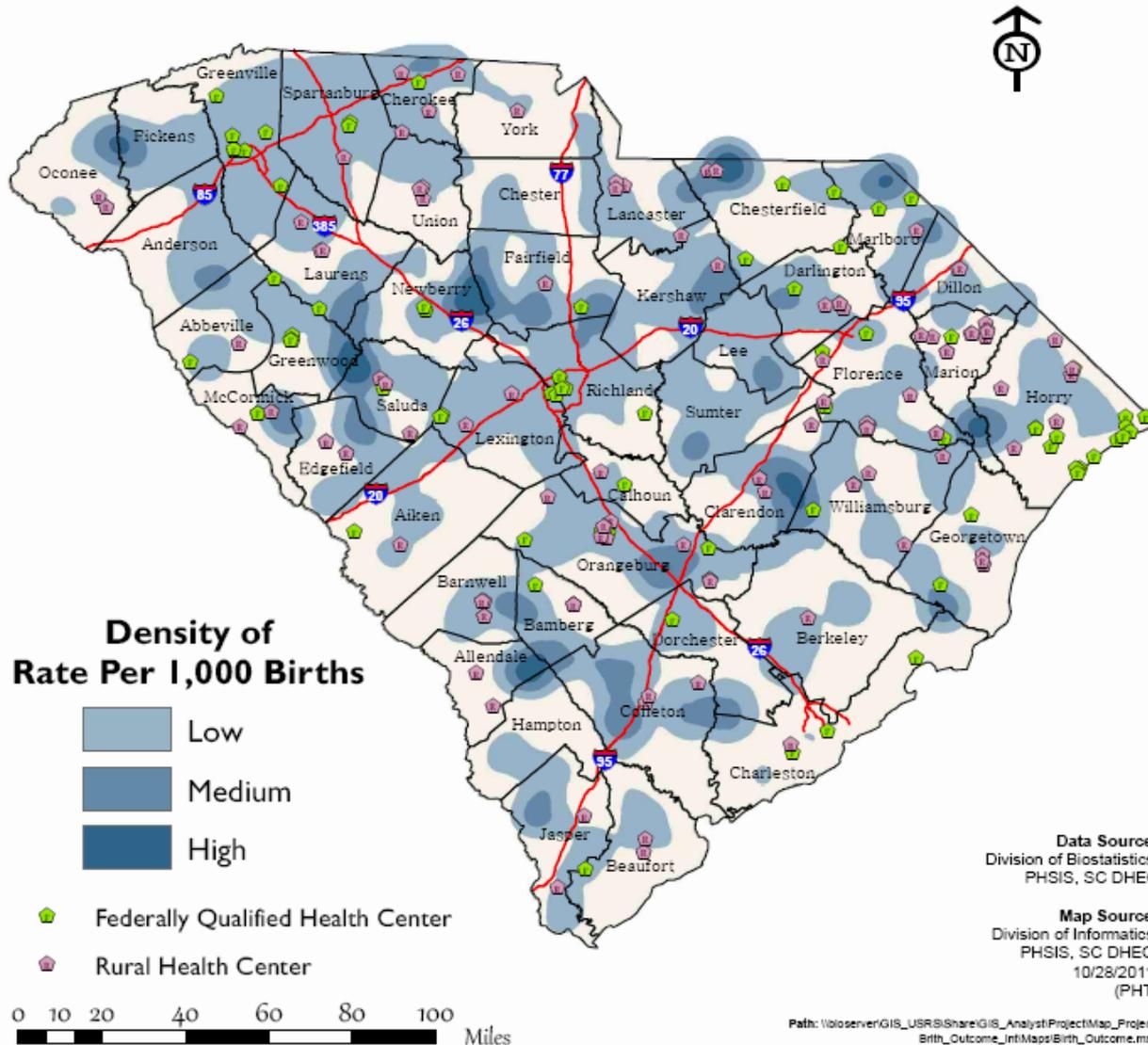


Racial disparity in rates of breastfeeding initiation

SC PRAMS data, 2004-2009.



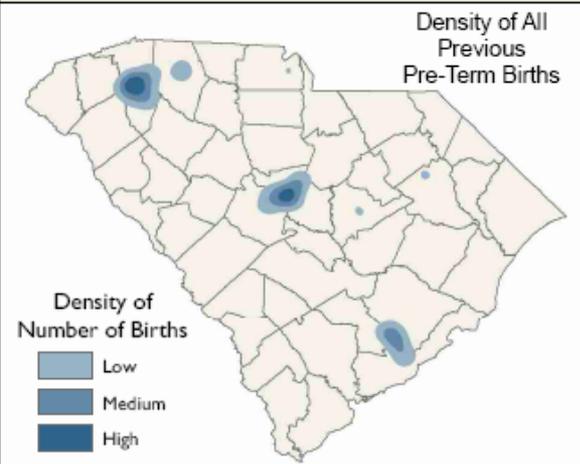
Previous Pre-Term Birth Rate South Carolina, 2007 - 2009



Rates were calculated on a 5 mile square grid, each grid cell was given calculated the rate value.

Densities were calculated with a kernel density function using a 100 meter cell size and 10 mile search radius.

Only live births matched to an exact address were used. Addresses that were matched to a Zip Code or county centroid were not used (e.g. Rural Routes and PO Boxes)



Data Source:
 Division of Biostatistics,
 PHSIS, SC DHEC

Map Source:
 Division of Informatics,
 PHSIS, SC DHEC,
 10/28/2011,
 (PHT)

Path: \\blserver\GIS_USRS\Share\GIS_Analyst\Project\Map_Project\Birth_Outcome_Info\Map\Birth_Outcome.mxd

Summary

Maternal
Characteristics

Geography

Teen
Pregnancy

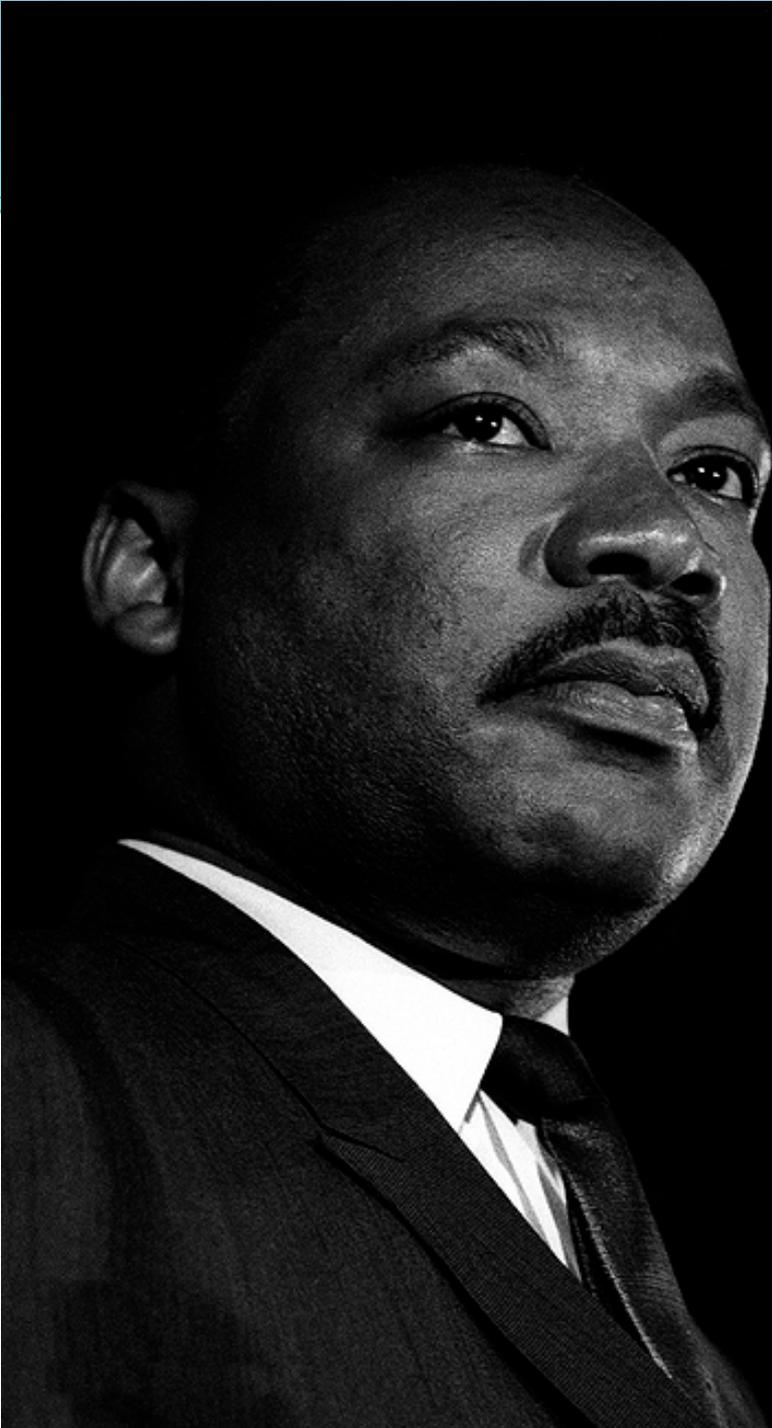
Access to Care

Smoking and
Breastfeeding

17- α OH
Progesterone

Partners for Change

- DHEC Perinatal Regionalization
- Nurse-Family Partnership
- PASOs Program
- CenteringPregnancy
- BirthMatters
- SC Campaign to Prevent Teen Pregnancy
- PREP
- DHEC Family Planning
- Low Country Healthy Start
- Palmetto Healthy Start
- PeeDee Healthy Start
- Healthy Families America
- Loving Support Breastfeeding Peer Educators
- DHEC Natural Nutrition
- Text4Baby
- SC Quitline
- DHEC Birth Defects Surveillance
- DHEC Fetal and Infant Mortality Review
- DHEC Oral Health Coalition
- Smiling Stork



“Of all the forms of
inequality, injustice
in health care
is the most shocking
and inhumane.”

Martin Luther King, Jr.