

An Overview of the Community Health Status Indicators GIS Analyst

**Andrew Dent, MA, MBA
Janet Heitgerd, PhD**

**Geospatial Research, Analysis, and Services Program
Division of Health Studies
Agency for Toxic Substances and Disease Registry
Atlanta, Georgia**

GIS Component - Collaborative Effort

- **ATSDR – Kim Elmore and Brian Kaplan**
- **CDC – Marilyn Metzler and Jim Holt**
- **HRSA – Keisher Highsmith**
- **Johns Hopkins – Norma Kanarek**
- **Public Health Foundation – Jennifer Stanley**
- **ASTHO – Koren Melfi**
- **The Polis Center – Karen Comer**

Community Health Status Indicators Project (CHSI)

Goal:
To develop a resource for monitoring and analyzing community health status at the county level

CHSI
Community Health Status Indicators

Our Mission, Promote Physical and Mental Health and Prevent Disease, Injury and Disability

Home About the Data About the Project How to Use This Site Library of Tools

Select State & County

Community Health Status Report

The Community Health Status Report provides health indicator definitions, sources, and methods. To view a particular report, first select a State and County from the dropdowns to be left, then click Display Data.

The Community Health Status Report is a collection of nationally available indicators for counties representing several areas of responsibility for public health. While for many of the indicators there may be more than one definition of the same problem, or source, the descriptions that follow are the choice made for this project and the means for ensuring that health measures for communities are consistent and not based on differing definitions or methodologies.

The estimates presented here rely on various data sources, methods, and calculations, some of which may not be appropriate for particular counties and/or purposes. Users should be aware of the limitations of these estimates. Those data that are estimated do not represent official Department of Health and Human Services statistics. We hope that the indicators provided in the CHSI Reports will be useful to communities and request feedback and comments.

Data Sources, Definitions, and Notes

The Community Health Status Report provides health indicator definitions, sources, and methods used in the Community Health Status Reports created by the Community Health Status Indicators (CHSI) Project. It is not intended to stand alone, but to be used as a reference for the user of the county health profile provided for every U.S. County.

The Community Health Status Reports are a collection of nationally available indicators for counties representing several areas of responsibility for public health. While for many of the indicators there may be more than one method for calculating rates or percentages as well as more than one definition of the same problem, or source, the descriptions that follow are the choice made for this project and the means for ensuring that health measures for communities are consistent and not based on differing definitions or methodologies.

What's Really Killing Us?

While we may measure deaths due to heart disease, cancer or other causes, we should always keep in mind that the factors such as tobacco use, diet, activity and alcohol use substantially contribute to these deaths.

For example, as shown in the graph (left) tobacco use accounts for 18 percent of all U.S. deaths.

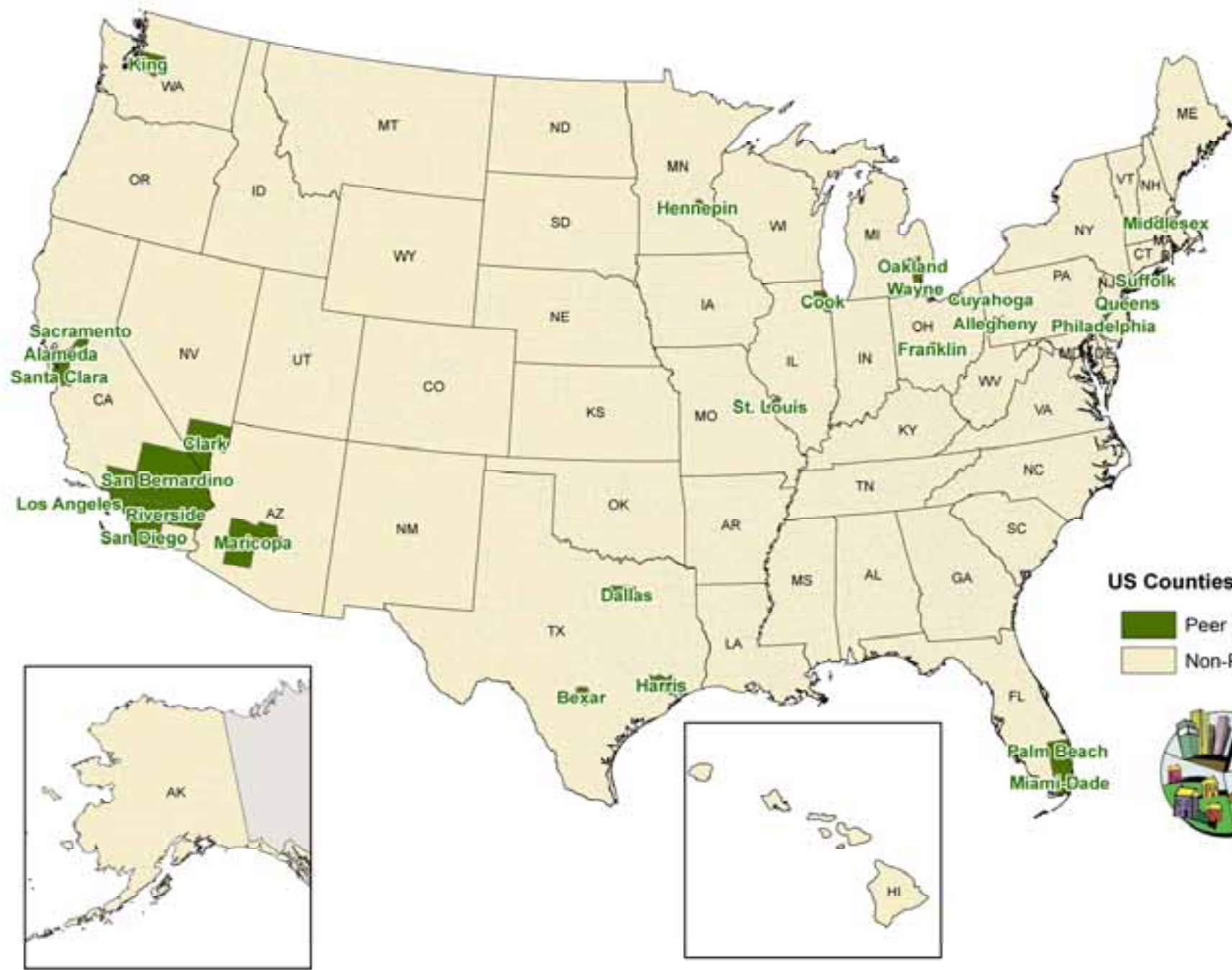
Other factors will proceed before you greatly risk factor include excessive drinking, excessive alcohol consumption, unsafe driving, and drug use.

Source: McKeown, JH, & Franks, RW (1996). Actual causes of death in the United States. *JAMA*, 276(18), 2027-2032.



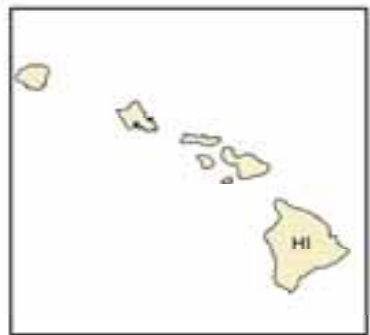
CHSI

- County-level profiles to monitor & address community health
- Easy to understand reports for all 3000+ U.S. counties
- Convey a range of community and public health issues
- HP 2010 objectives
- Peer counties



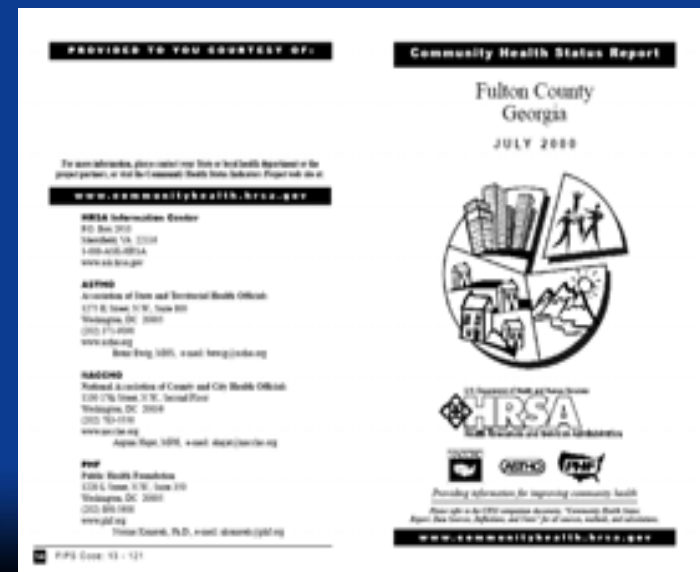
US Counties - Strata 1

- Peer County
- Non-Peer County



CHSI Background

- Pilot started by HRSA 1998
- Mailed and web-based PDF files for all 3,082 US counties
- 20,000 'hits' monthly
- Website removed in 2000



Indicator Sets

- Vulnerable Populations
- Summary Measures of Health
- National Leading Causes of Death
- Risk Factors for Premature Death
- Measures of Birth and Death
- Relative Health Importance
- Preventive Services Use
- Access to Care

Community Health Status Report

Orange County California



U.S. Department of Health and Human Services
HRSA
Health Resources and Services Administration



Providing information for improving community health

Please refer to the CHSI companion document, "Community Health Status Report: Data Sources, Definitions, and Notes" for all sources, methods, and calculations.

www.communityhealth.hrsa.gov

DEMOGRAPHIC INFORMATION

Orange County, CA

Population size:	2,674,091
Population density (people per square mile):	3,385
Individuals living below poverty level:	11.3%

Age distribution

Under Age 18:	26.4%
Age 65-84:	8.4%
Age 85+:	1.1%

Nonwhite population

Black:	1.8%
American Indian:	0.6%
Asian/Pacific Islander:	12.9%
Hispanic origin:	28.5%

PEER COUNTIES

These peer counties (counties and county-like geographic areas) were grouped on the basis of frontier status and population size. There are 34 counties like Orange County, CA. (See the next panel.) Below is the range of values represented by the peer areas.

Population size:	1,003,595 - 9,145,219
Population density (people per square mile):	81 - 54,865
Individuals living below poverty level:	5.1 - 31.4 %

Age distribution

Under Age 18:	18.3 - 32.9%
Age 65-84:	6.4 - 21.6%
Age 85+:	0.7 - 2.6%

Nonwhite population

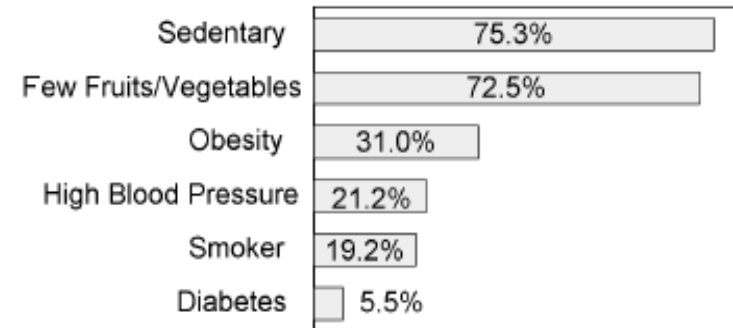
Black:	1.8 - 43.1%
American Indian:	0.1 - 2.0%
Asian/Pacific Islander:	1.4 - 21.3%
Hispanic origin:	0.9 - 55.9%

Source: U.S. Census Bureau, 1997. These population figures are used for calculations throughout brochure, when appropriate.

RISK FACTORS FOR PREMATURE DEATH

California

Communities may wish to obtain information about these measures, collected and monitored at the local level.



Prevalence estimates are from the Behavioral Risk Factor Surveillance System (BRFSS), (High Blood Pressure) 1997, (all others) 1998. For local estimates, contact your State BRFSS office.

ACCESS TO CARE

Orange County, CA

In addition to use of services, access to care may be characterized by medical care coverage and service availability.

Uninsured individuals in the State (1998) ¹ :	7,373,000
Medicare beneficiaries (1998) ² :	
Elderly (Age 65+):	253,100
Disabled:	23,650
Medicaid beneficiaries: <i>The number of beneficiaries for each county is not available nationally, but may be obtained from your State.</i>	
Primary care physicians per 100,000 pop. (1998) ³ :	103.3
Dentists per 100,000 pop. (1998) ³ :	67.3
Community/Migrant Health Centers (1999) ³ :	Yes
Health Professional Shortage Area (12/17/99) ³ :	No

1 Estimate of uninsured individuals in the State was obtained from the U.S. Census Bureau, Current Population Survey, 1998.

2 Health Care Financing Administration.

3 Area Resource File, Health Resources and Services Administration.

PREVENTIVE SERVICES USE

INFECTIOUS DISEASE CASES

Orange County, CA

These diseases respond to public health control efforts. The expected number (in parentheses) is based on the occurrence of cases among peer counties.

	Cases	Expected
AIDS	rna	rna
Haemophilus influenzae B	nnn	nnn
Hepatitis A	895	(1,225)
Hepatitis B	232	(383)
Measles	10	(9)
Pertussis	63	(178)
Congenital Rubella Syndrome	0	(0)
Syphilis	rna	rna
Tuberculosis	rna	rna

● Indicates a status favorable to peers.

○ Indicates a status less than favorable.

rna The release of data for all counties has not been authorized.

nnn This was not a nationally notifiable condition for the entire time period.

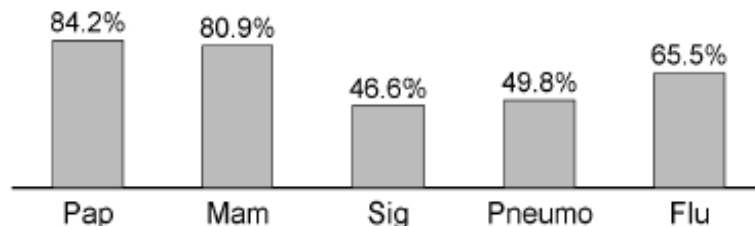
Source: Centers for Disease Control and Prevention, 1996-1998.

CHILD PREVENTIVE SERVICES USE

Indicators such as immunizations, dental caries, and the prevalence of lead screening are not collected at the national level and must be obtained locally.

ADULT PREVENTIVE SERVICES USE (%)

California



Source: Behavioral Risk Factor Surveillance System.

Pap smears among women 18+, past three years, (1998).

Mammography screening among women 50+, past 2 years, (1998).

Sigmoidoscopy screening among adults 50+, past five years, (1997).

Pneumonia vaccine among adults 65+, ever, (1998).

Flu vaccine among adults 65 and older, past year, (1997).

PEER COUNTIES

Maricopa County, AZ
 Alameda County, CA
 Los Angeles County, CA
 Orange County, CA
 Riverside County, CA
 Sacramento County, CA
 San Bernardino County, CA
 San Diego County, CA
 Santa Clara County, CA
 Broward County, FL
 Dade County, FL
 Palm Beach County, FL
 Cook County, IL
 Middlesex County, MA
 Oakland County, MI
 Wayne County, MI
 Hennepin County, MN

St. Louis County, MO
 Clark County, NV
 Bronx County, NY
 Kings County, NY
 Nassau County, NY
 New York County, NY
 Queens County, NY
 Suffolk County, NY
 Cuyahoga County, OH
 Franklin County, OH
 Allegheny County, PA
 Philadelphia County, PA
 Bexar County, TX
 Dallas County, TX
 Harris County, TX
 Tarrant County, TX
 King County, WA



.....
Healthy People 2010 Vision:
Healthy People in Healthy Communities

SUMMARY MEASURES OF HEALTH

.....
Healthy People 2010 Goal:
Increase quality and years of healthy life

Orange County, CA

AVERAGE LIFE EXPECTANCY (1990)¹

77.5 years

- Range among peer counties² (71.7 - 77.1)
- Median for all U.S. counties [75.4]

ALL CAUSES OF DEATH (1993-97)³

784.5 deaths/100,000 population (Age-adjusted to year 2000 standard)

- Range among peer counties² (805.5 - 1,013.2)
- Median for all U.S. counties [923.2]

SELF-RATED HEALTH STATUS (1993-97)⁴

10.9 % (Percent of adults who report fair or poor health)

- Range among peer counties² (8.8-17.2%)
- Median for all U.S. counties [14.7%]

AVERAGE NUMBER OF UNHEALTHY DAYS IN PAST MONTH (1993-97)⁴

5.4 days (Average number of unhealthy days reported in a 30-day period)

- Range among peer counties² (4.7-6.2)
- Median for all U.S. counties [5.1]

• Indicates a status favorable to peers.

• Indicates a status less than favorable.

A blank indicates that no comparison was made.

fff No report, fewer than 10 deaths reported during the 5-year time period or fewer than 50 respondents to the survey.

1 Developed by Harvard University for the Health Resources and Services Administration's Bureau of Primary Health Care.

2 Eighty percent of the peer group values fall within this range.

3 National Center for Health Statistics.

4 Behavioral Risk Factor Survey; local estimates were developed by Centers for Disease Control and Prevention and are constructed from State-level data.

VULNERABLE POPULATIONS

Orange County, CA

Vulnerable populations may face unique health risks and barriers to care, requiring enhanced services and targeted strategies for outreach and case management.

Vulnerable populations include:



People with no high school diploma ¹ (among adults age 25 and older):	316,780
Unemployed individuals (1998):	41,400
People who are severely work disabled ¹ :	53,480
Those suffering from major depression ¹ :	120,480
Recent drug users ¹ (within past month):	157,450

ENVIRONMENTAL HEALTH

Orange County, CA

Infectious diseases² (1996-1998):

	Cases	Reported	Expected
• E. coli		23	(52)
• Salmonella		1,440	(1,412)
• Shigella		722	(856)

Toxic chemicals released annually³ (EPA, 1996): 2,645,124 pounds

National air quality standards met by county³ (1998):

Carbon Monoxide	Nitrogen Dioxide	Sulfur Dioxide	Ozone	Particulate Matter	Lead
Yes	Yes	Yes	No	Yes	Yes

• Indicates a status favorable to peers.

• Indicates a status less than favorable.

fff This was not a nationally notifiable condition for the entire time period.

1 The most current estimates of prevalence, obtained from various sources, (see the companion document for details), were applied to 1997 county population figures.

2 Prevention of these diseases is linked to having clean water, and proper hygiene and food handling. The expected number (in parentheses) is based on the occurrence of cases among peer counties. Source: Centers for Disease Control and Prevention.

3 Environmental Protection Agency (Toxic Chemical Release Inventory, AIRSData).

RELATIVE HEALTH IMPORTANCE

Orange County, CA

Your Health Status Compared to Peers

		Unfavorable	Favorable
Your County's Health Status Compared to the U.S. Rate	Unfavorable	🔍	Older Mothers, 40+, No Care in First Trimester, Coronary Heart Disease
	Favorable		🍏

Low Birth Wt. (<2500 g), Very Low Birth Wt. (<1500 g), Premature Births (<37 weeks), Teen Mothers, <18, Unmarried Mothers, Infant Mortality, White Infant Mortality, Black Infant Mortality, Neonatal Infant Mortality, Post-neonatal Infant Mortality, Breast Cancer (Female), Colon Cancer, Homicide, Lung Cancer, Motor Vehicle Injuries, Stroke, Suicide, Unintentional Injury

The Relative Health Importance table creates four categories of relative concern by simply comparing a county to its peers and to the U.S.

A county's indicators in the upper left-hand box (🔍) are higher than the U.S. and its peers and may warrant more attention. Conversely, indicators in the lower right-hand box (🍏) of the table compare favorably to both peers and the U.S. The other boxes represent intermediate levels of health where a county's rate is higher than either its peers or the U.S., but not both.

Source: Death Rates and Birth Measures Tables from pages 6-7.

Methodology: Studnicki, J. et al. (1997). Community health report card: Comprehensive Assessment for Tracking Community Health (CATCH), Best Practices and Benchmarking in Healthcare, Vol 2(5), 196-207.

NATIONAL LEADING CAUSES OF DEATH

Healthy People 2010 Goal: Eliminate Health Disparities

Orange County, CA

	White	Black	Other	Hispanic
Under Age 1				
Complications of Pregnancy/Birth	12%	11%	nrf	10%
Birth Defects	35%	19%	33%	39%
Ages 1-14				
Injuries	30%	nrf	45%	35%
Cancer	17%	nrf	16%	16%
Homicide	nrf	nrf	nrf	nrf
Ages 15-24				
Injuries	31%	25%	35%	25%
Homicide	25%	25%	27%	40%
Cancer	nrf	10%	nrf	nrf
Ages 25-44				
Injuries	18%	17%	17%	19%
Cancer	18%	11%	27%	13%
Suicide	nrf	11%	nrf	nrf
Heart Disease	nrf	13%	11%	nrf
HIV/AIDS	14%	21%	nrf	16%
Homicide	nrf	nrf	nrf	10%
Ages 45-65				
Cancer	38%	33%	44%	28%
Heart Disease	23%	28%	17%	19%
Ages 65+				
Heart Disease	38%	39%	33%	35%
Cancer	22%	24%	25%	22%

nrf No report, fewer than 20 deaths in the race/ethnicity and age group or less than 10% of the deaths.

Local data are presented for the Nation's top leading causes of death in each age group. Columns, within age categories, do not total 100% because all causes of death are not listed.

The most complete ethnicity data available are reported.

Source: National Center for Health Statistics, Vital Statistics Reporting System, 1995-1997.

MEASURES OF BIRTH AND DEATH

Orange County, CA

County Percent		Peer County Range ¹	Birth Measures	U.S. Percent 1997	Healthy People 2010 Target
5.3	👍	6.0-9.2	Low Birth Wt. (<2500 g)	7.5	5.0
0.9	👍	1.0-1.9	Very Low Birth Wt. (<1500 g)	1.4	0.9
8.7	👍	8.7-12.8	Premature Births (<37 weeks)	11.4	7.6
3.4	👍	2.1-6.2	Teen Mothers, <18	12.7	No objective
2.4	👍	1.6-3.2	Older Mothers, 40+	2.1	No objective
25.4	👍	19.6- 50.3	Unmarried Mothers	32.4	No objective
17.1	👍	11.0-34.3	No Care in First Trimester	17.0	10.0

County Rate		Peer County Range ¹	Infant Mortality ²	U.S. Rate 1997	Healthy People 2010 Target
4.8	👍	5.3-10.5	Infant Mortality	7.2	4.5
4.7	👍	4.5-7.3	White Infant Mortality	6.0	4.5
11.1	👍	9.9-17.8	Black Infant Mortality	13.7	4.5
3.2	👍	3.4- 6.9	Neonatal Infant Mortality	4.8	2.9
1.6	👍	1.6-3.3	Post-neonatal Infant Mortality	2.5	1.5

County Rate		Peer County Range ¹	Death Measures ³	U.S. Rate 1997	Healthy People 2010 Target
28.1	👍	27.0-35.6	Breast Cancer (Female)	28.6	22.2
18.8	👍	18.6-26.0	Colon Cancer	21.6	13.9
227.1	👍	194.5-303.5	Coronary Heart Disease	216.0	166.0
4.9	👍	3.2-18.1	Homicide	7.2	3.2
50.1	👍	43.8-66.2	Lung Cancer	58.1	44.8
9.3	👍	7.4-18.5	Motor Vehicle Injuries	15.8	9.0
60.1	👍	36.9-68.3	Stroke	62.0	48.0
8.9	👍	7.3-14.1	Suicide	11.4	6.0
13.0	👍	13.0-23.3	Unintentional Injury	33.3	20.8

The total number of births during this time period was 143,013 and the total number of deaths was 47,389.

👍 Indicates a status favorable to peer county median value and 🔍 indicates that a closer look and perhaps reduction of the percent or rate may be needed. (A blank indicates that no comparison was made).

nrif No report, fewer than 500 births and 3 events (birth measures and infant mortality) or fewer than 10 events (death measures) occurred during the specified time period.

1 Eighty percent of the peer group values fall within this range.

2 Infant Mortality: deaths per 1,000 live births (Neonatal: < 29 days; Post-neonatal: 1 - 12 months).

3 Rates are age-adjusted to year 2000 standard; per 100,000 population.

Source: National Center for Health Statistics, Vital Statistics Reporting System, 1995-1997.

.....
 Healthy
 People
 2010 is
 grounded
 in science,
 built
 through
 consensus,
 and
 designed
 to measure
 progress.

CHSI II

- Update existing indicators, add a few new ones
- Develop GIS component
- Document history of partnerships, challenges, feedback
- Re-debut October/November 2007 – *Preventing Chronic Diseases* (CDC e-journal)
- Lay groundwork for CHSI III, sustainability

CHSI Website

U.S. Department of Health & Human Services www.hhs.gov

Community Health Status Indicators CHSI

Our Mission: Promote Physical and Mental Health and Prevent Disease, Injury and Disability

Select State & County
Alabama
Barbour

Demographics

Demographics: Barbour County, AL
Data Details

Individuals living below poverty level ¹	22.1%
Population size ¹	28,414
Population density (people per square mile) ²	32

Age Distribution¹		Race/Ethnicity¹	
Under Age 19	24.3%	White	52.3%
Age 19-64	62.5%	Black	46.8%
Age 65-84	11.6%	American Indian	0.4%
Age 85+	1.6%	Asian/Pacific Islander	0.3%
		Hispanic origin	3.1%

Peer Counties
Data Details

These peer counties (counties and county-like geographic areas) were grouped on the basis of frontier status and population size. Below is the range of values represented by the peer areas.

Individuals living below poverty level ¹	18.0 - 24.6%
Population size ¹	27,269 - 43226.0
Population density (people per square mile) ²	14 - 41

Age Distribution¹		Race/Ethnicity¹	
Under Age 19	23.5 - 32.2%	White	48.6 - 97.0%
Age 19-64	54.9 - 62.5%	Black	0.7 - 50.7%
Age 65-84	9.6 - 12.6%	American Indian	0.2 - 7.1%
Age 85+	1.2 - 1.8%	Asian/Pacific Islander	0.2 - 2.3%
		Hispanic origin	1.0 - 67.7%

¹ The Census Bureau, Small Area Income Population Estimates, 2005.
² HSA, Area Resource File, 2005.
³ The Census Bureau, Small Area Income Poverty Estimates, 2005.

Mapping
Print this Page
Print Report
Send link to this page

Mapping
Print this Page
Print Report
Send link to this page

CHSI GIS Analyst

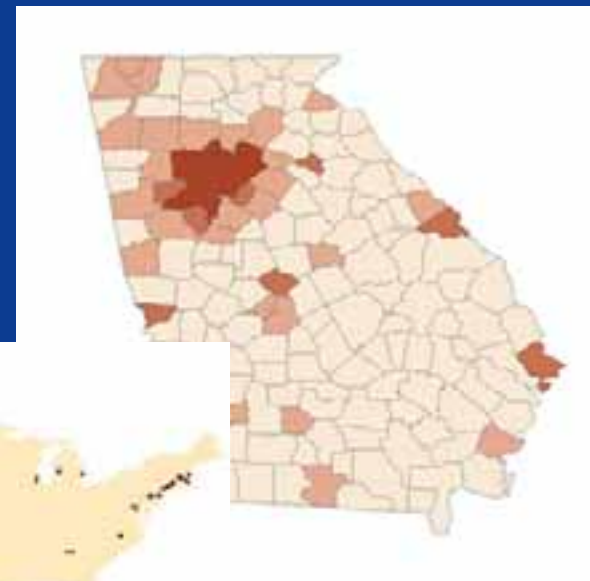
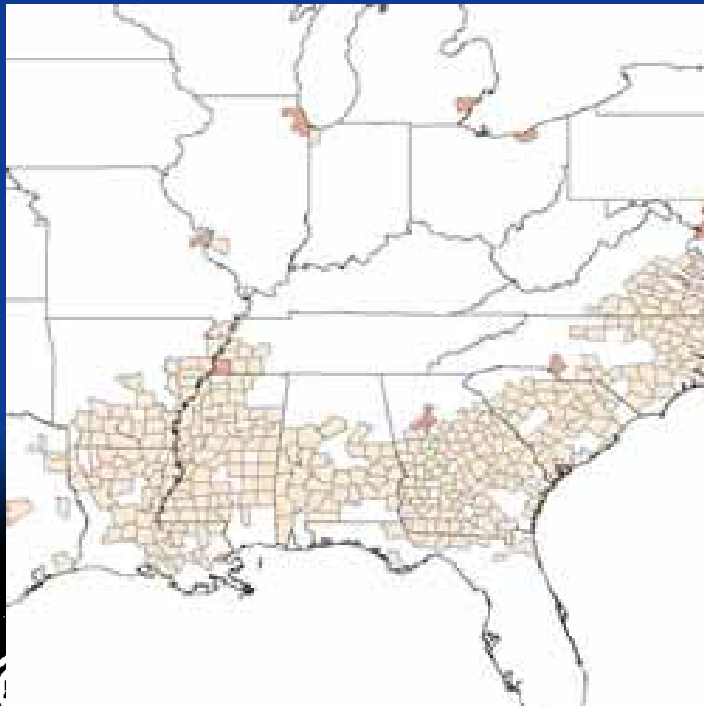
- Original Release of CHSI
 - In 2000, mapping was not routinely a part of public health projects
 - When GIS was integrated, it was thought of as an “after-thought”, not an integral piece enabling the interpretation of the public health data

Since 2000...

- Much has changed surrounding the increased affordability, availability, and ease of use of GIS software.
- GIS software has made critical advances enabling the sharing of GIS data layers and the development of web-based GIS components.
- Proliferation of web-based tools (primarily for location and travel) have familiarized the public with the concept and purpose of mapping.

CHSI II and the CHSI GIS Analyst

- GIS has been identified as being a critical component for the visualization and interpretation of the CHSI indicators.

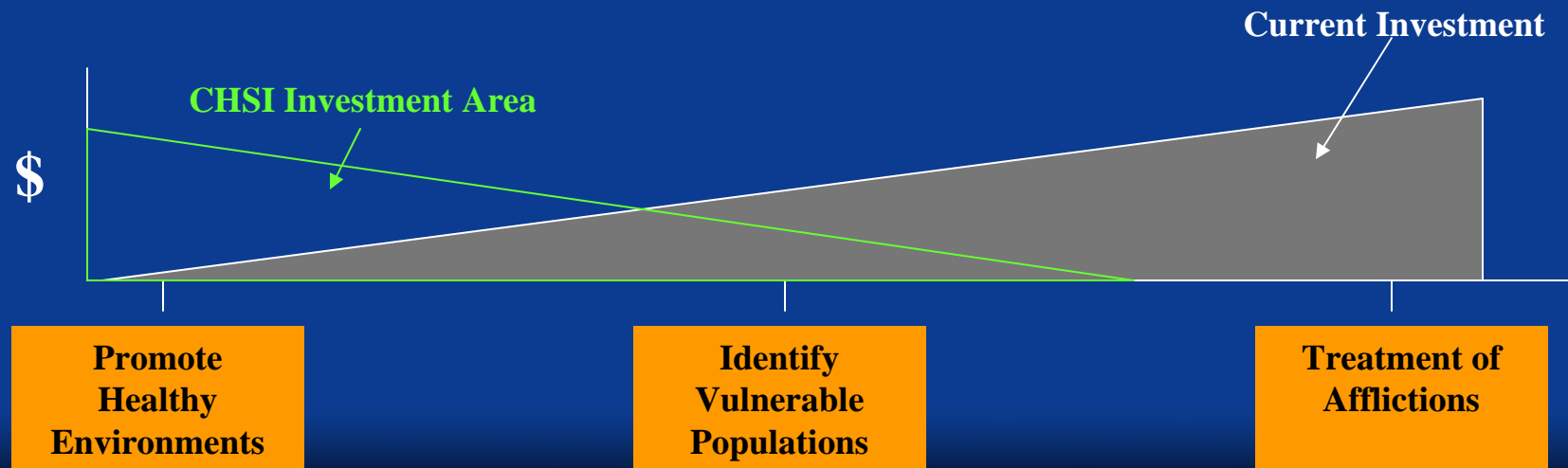


AGENCY FOR TOXIC SUBSTANCES
AND DISEASE REGISTRY

GRASP
GEOSPATIAL RESEARCH ANALYSIS &
SERVICES PROGRAM

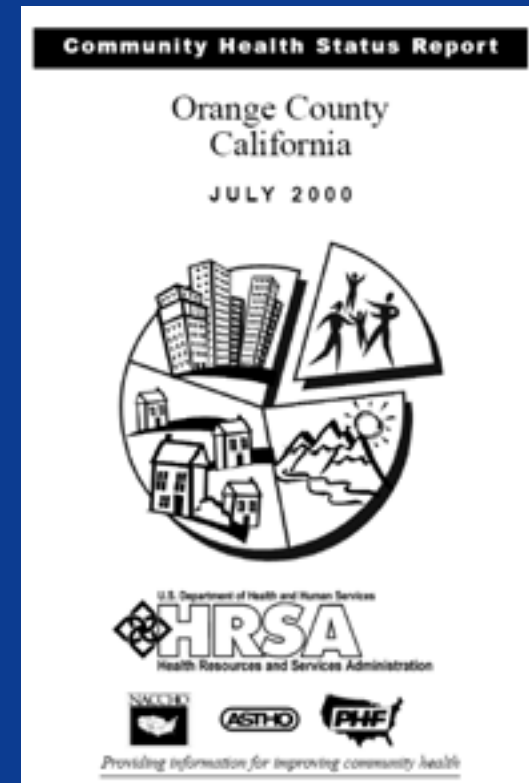
Upstream Investment

- In the plenary, Dr. Bailey encouraged upstream investment, or the investment in activities to promote healthy environments and identify vulnerable populations, as opposed to investment primarily in the treatment of afflictions. CHSI represents just such an investment.



Overall Goals

- Ease of Use
 - Site designers were aware that positive characteristics of the first hard copy CHSI report were its simplicity, ease of use, and organization.
- Choropleth Map and Tabular Data Displays
 - Map and tabular displays must be employed to communicate the data in as rich a way as possible.



MEASURES OF BIRTH AND DEATH

Orange County, CA

County Percent	Four County Range*	Birth Measure	U.S. Percent 1997	Healthy People 2010 Target
13.2	13.0-13.2	Low Birth Rate (2000)	13.2	13.2
13.2	13.0-13.2	High Birth Rate (2000)	13.2	13.2
13.2	13.0-13.2	Infant Mortality (2000)	13.2	13.2
13.2	13.0-13.2	Stillbirths (2000)	13.2	13.2
13.2	13.0-13.2	Perinatal Mortality (2000)	13.2	13.2
13.2	13.0-13.2	Infant Mortality (2000)	13.2	13.2
13.2	13.0-13.2	Stillbirths (2000)	13.2	13.2
13.2	13.0-13.2	Perinatal Mortality (2000)	13.2	13.2
13.2	13.0-13.2	Infant Mortality (2000)	13.2	13.2
13.2	13.0-13.2	Stillbirths (2000)	13.2	13.2
13.2	13.0-13.2	Perinatal Mortality (2000)	13.2	13.2

County Rate	Four County Range*	Infant Mortality†	U.S. Rate 1997	Healthy People 2010 Target
13.2	13.0-13.2	Infant Mortality	13.2	13.2
13.2	13.0-13.2	Stillbirths	13.2	13.2
13.2	13.0-13.2	Perinatal Mortality	13.2	13.2
13.2	13.0-13.2	Infant Mortality	13.2	13.2
13.2	13.0-13.2	Stillbirths	13.2	13.2
13.2	13.0-13.2	Perinatal Mortality	13.2	13.2

County Rate	Four County Range*	Death Measure†	U.S. Rate 1997	Healthy People 2010 Target
13.2	13.0-13.2	Stroke	13.2	13.2
13.2	13.0-13.2	Heart Disease	13.2	13.2
13.2	13.0-13.2	Cancer	13.2	13.2
13.2	13.0-13.2	Chronic Disease	13.2	13.2
13.2	13.0-13.2	Diabetes	13.2	13.2
13.2	13.0-13.2	Alcohol	13.2	13.2
13.2	13.0-13.2	Smoking	13.2	13.2
13.2	13.0-13.2	Unintentional Injury	13.2	13.2

* Four County Range based on 1997 data for Orange, Alameda, Contra Costa, and Santa Clara counties. † Data for 1997.

† Healthy People 2010 target for stroke, heart disease, and chronic disease is 13.2. For diabetes, the target is 13.2. For alcohol, the target is 13.2. For smoking, the target is 13.2. For unintentional injury, the target is 13.2.

Design Considerations

- User Assessment
- Static vs. Dynamic Maps
- Cartography, Visualization, and Interpretation
- User Interface
- Architecture & Technology

DESIGN CONSIDERATIONS

User Assessment

- User needs assessment was not feasible due to lack of available resources.
- GIS Team focused initial efforts on designing a site that would serve the needs of existing CHSI users, namely local community groups and local public health staff.

DESIGN CONSIDERATIONS

Static versus Dynamic Maps

- Advantages of Static Maps
 - Map is pre-produced, allowing important cartographic decisions to be performed ahead of time
 - Map is easily distributed
 - User is not required to operate complex controls or make design decisions.
- Advantages of Dynamic Maps
 - Permits users to make important decisions resulting in a map that better meets the user needs.
 - Permits users to manipulate data and control the choropleth classes, map extent, and layers that might emphasize the message that is desired.

DESIGN CONSIDERATIONS

Cartography, Visualization, and Interpretation

- A four class percentile ranking classification was chosen to simplify interpretation and the synthesis of multiple indicators.
- Color will be employed to enable identification of indicator group containing the indicator shown on the map.

DESIGN CONSIDERATIONS

Interface

- Intuitive Tabbed Interface
 - The tabbed interface is a mechanism to bundle different views of selected geographies/data.
 - State View Tab
 - Enables comparison county to other counties in the same state.
 - Peer County View Tab
 - Enables comparison of county to other peer counties across the United States
 - Indicator Comparison Tab
 - Enables the comparison of multiple indicators for a single county

Indicator Comparison View

Peer County View

State View



1. SELECT Geography >>

State

County

2. SELECT Group and Indicator >>

Indicator Group

Indicator Group

GUI

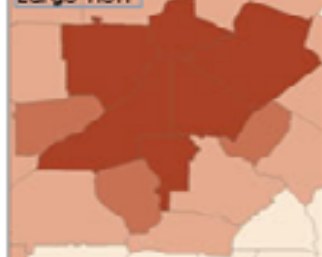
Demographics >> Population Density >> Gwinnett County, Georgia

[Back to CHSI Report](#)

[Printer-friendly version](#)

Gwinnett Cty GA

Large View



Population Density

persons per Square Mile



Population Density — This number is calculated by using the following formula: 1997 Total Population Estimate / Land Area (square miles). Land Area is from the "County and City Data Book," 1994, CD-ROM, a statistical abstract supplement published by the U.S. Bureau of the Census.

Peer Counties



Indicator Comparison View

Peer County View

State View

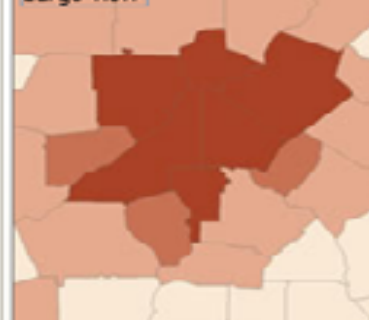
Demographics >>

Population Density

[Back to CHSI Report](#)

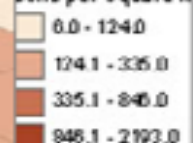
Gwinnett Cty GA

Large View



Population Density

persons per Square Mile



Indicator Group

Indicator

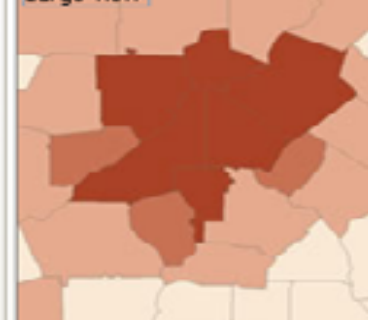
Demographics >>

Population Density

[Back to CHSI Report](#)

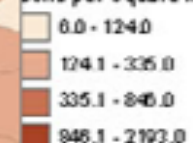
Gwinnett Cty GA

Large View



Population Density

persons per Square Mile



Indicator Group

Indicator

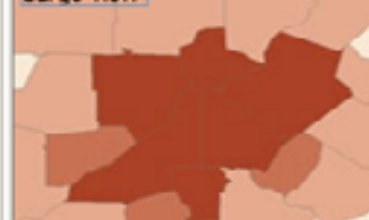
Demographics >>

Population Density

[Back to CHSI Report](#)

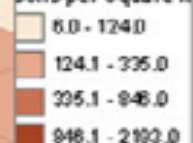
Gwinnett Cty GA

Large View



Population Density

persons per Square Mile



Demographics >>

Population Density

[Back to CHSI Report](#)

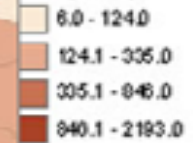
Gwinnett Cty GA

Large View



Population Density

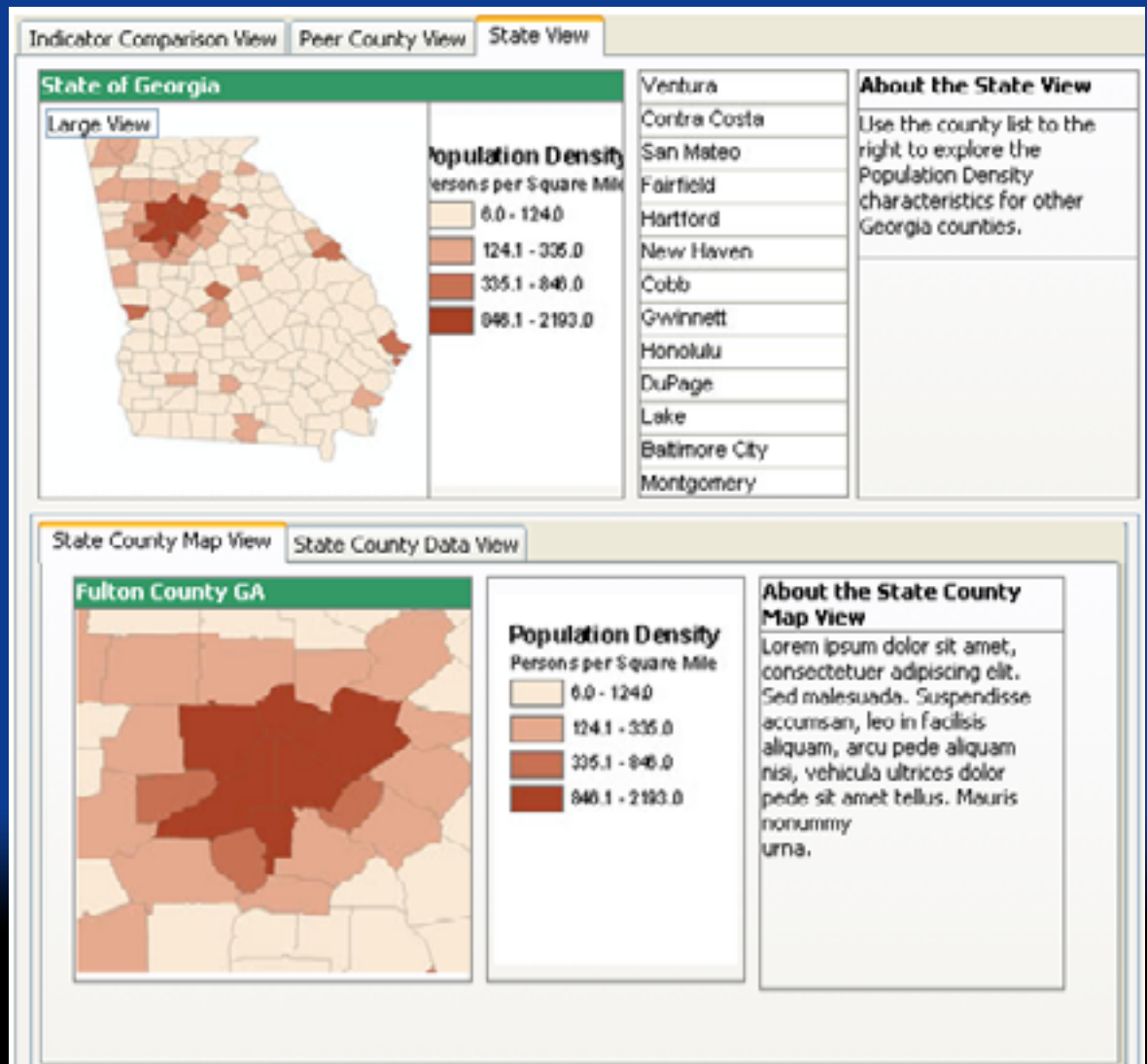
persons per Square Mile



DESIGN CONSIDERATIONS

State View Tab

- Facilitates access to indicator maps for other counties in selected state.



DESIGN CONSIDERATIONS

Peer County View Tab

- This tab enables the exploration of peer county data for the selected indicator.

Indicator Comparison View Peer County View State View

Peer Counties

Large View

George Overholt
Hawaii Honolulu
Illinois DuPage
Iowa Lake
Maryland Baltimore City
Maryland Montgomery
Maryland Prince George's
Massachusetts Norfolk
Massachusetts Bristol

About the Peer County View

Use the county list to the left to explore the Population Density characteristics of peer counties for Gwinnett County, GA.

Peer County Map View Peer County Data View

Prince George's City MD

Large View

Population Density

Persons per Square Mile

0.0 - 104.0
104.1 - 208.0
208.1 - 416.0
416.1 - 2108.0

About the Peer County Map View

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Sed nunc magna. Suspendisse acutem, leo in facilis aliquam, orci pede aliquam ris, vehicula ultrices dolor pede sit amet tellus. Mauris nonummy urna.

Indicator Comparison View Peer County View State View

Peer Counties

Large View

George Overholt
Hawaii Honolulu
Illinois DuPage
Iowa Lake
Maryland Baltimore City
Maryland Montgomery
Maryland Prince George's
Massachusetts Norfolk
Massachusetts Bristol

About the Peer County View

Use the county list to the left to explore the Population Density characteristics of peer counties for Gwinnett County, GA.

Peer County Map View Peer County Data View

Population Density (Persons Per Square Mile)

4000
3000
2000
1000
0

3,630

Prince George's City MD (1,586)

Gwinnett County GA (1,417)

About the Peer County Data View

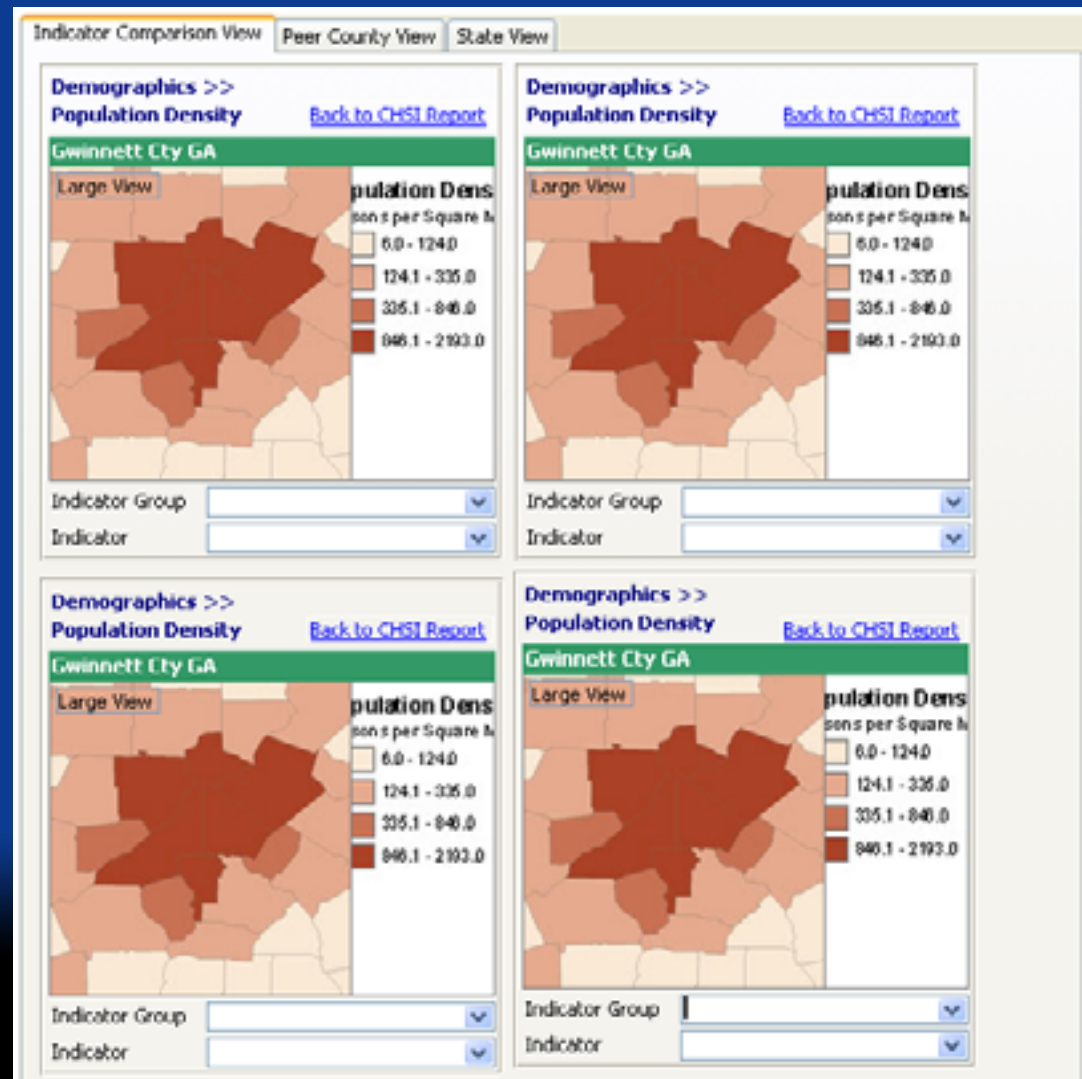
The Peer County Data View displays a tabular representation of the data range, the data value for Prince George's County, MD, and the data value for Gwinnett County, GA.

Map View enabled.

Data View enabled.

Indicator Comparison Tab

- Enables the comparison of different indicators for the same geography.



DESIGN CONSIDERATIONS

Architecture and Technology

- A standard three-tier architecture is being employed.
 - Allows components to be replaced / upgraded independently at any time without disruption to the system as a whole.
- Data Tier
 - Microsoft SQL Server 2000 / ESRI SDE 9.2
- Application Tier
 - Microsoft .Net 2003 / Microsoft IIS / Telerik .Net Controls / ESRI ArcIMS 9.2
- Presentation Tier
 - HTML / Javascript

Future Plans

- Beta Release and User Testing will begin November 2007.

Conclusion

- Questions?

Andrew Dent, MBA, MA
aed5@cdc.gov

Janet Heitgerd, PhD
jbh0@cdc.gov