



Public Health

Prevent. Promote. Protect.

Shelby County Health Department

Seeing is Believing: Patterns of Life Expectancy, Poverty, Equity & Health.

Lilian Ogari and David Sweat

Office of Epidemiology

Shelby County Health Department



Public Health
Prevent. Promote. Protect.

Shelby County Health Department

Introduction

- ❖ Chronic diseases are leading causes of death in US, including Shelby County TN.
- ❖ Chronic diseases are not reportable.
- ❖ Rely on National data sets or surveys to monitor the trend of chronic diseases.
- ❖ Previously these trends were reported down to county level → broad and provide little information for local decision making.

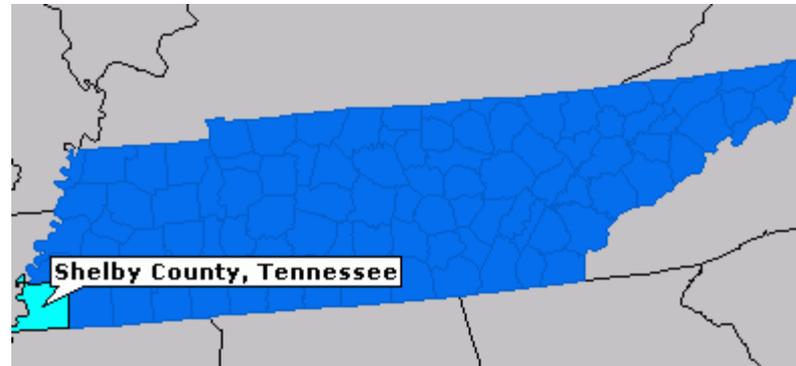


Public Health
Prevent. Promote. Protect.

Shelby County Health Department

Ranking

- **United States ranks 37th in the world**
- **Tennessee ranks 42nd nationally**
- **Shelby County ranks 39th among Tennessee Counties**



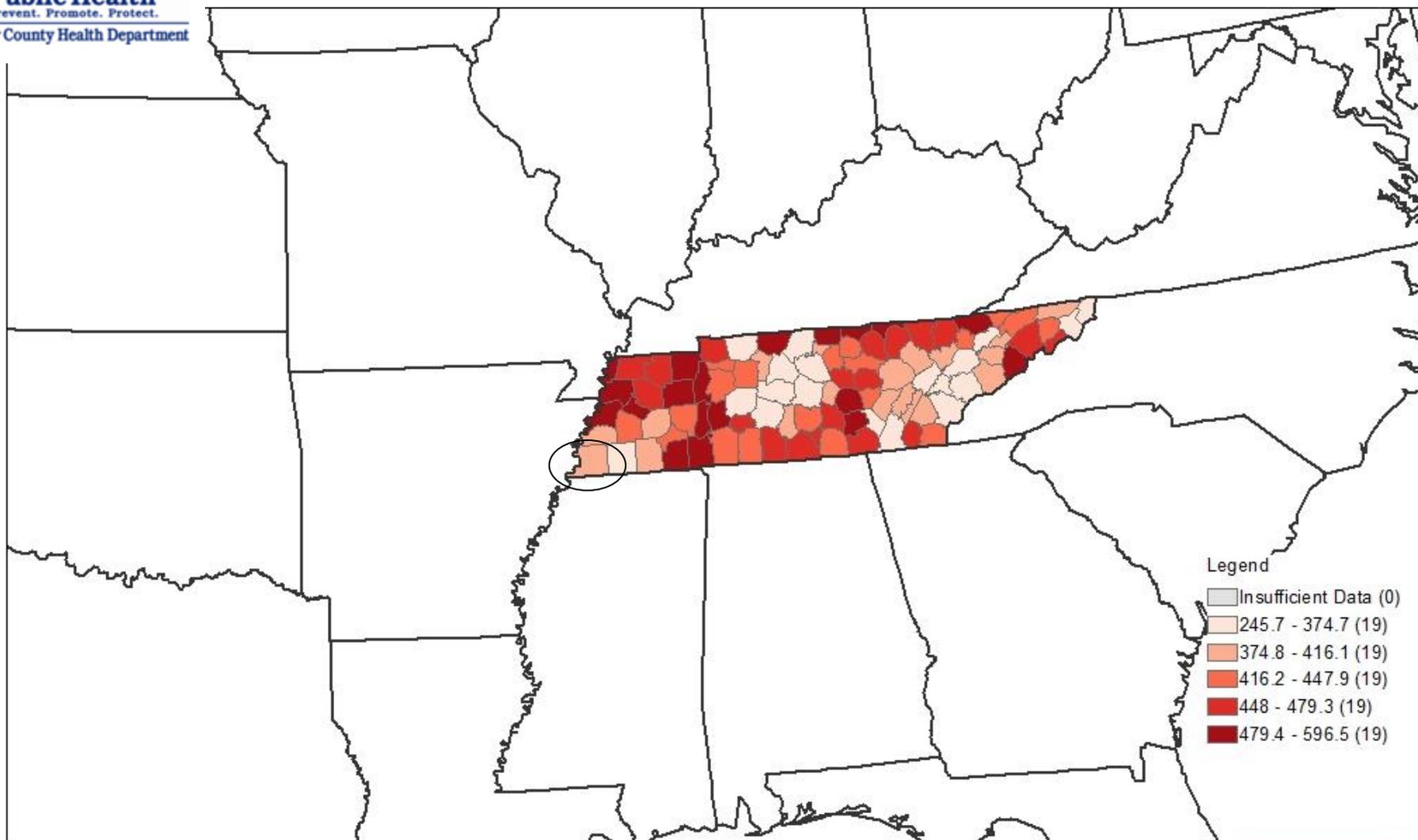
- Source: Robert Wood Johnson Foundation County Health Rankings and United Health Foundation
- <http://www.epodunk.com/cgi-bin/genInfo.php?locIndex=12664>



Heart Disease Death Rate per 100,000, 35+, All Race, All Gender, 2011-2013

Public Health
Prevent. Promote. Protect.

Shelby County Health Department



This map was created using the Interactive Atlas of Heart Disease and Stroke, a website developed by the Centers for Disease Control and Prevention, Division for Heart Disease and Stroke Prevention.
<http://www.cdc.gov/dhdsp/maps/atlas>





Public Health
Prevent. Promote. Protect.

Shelby County Health Department

Our Goals

- ❖ Perform sub-County analysis on chronic diseases that is HIPAA compliant.
- ❖ Use various data streams to identify hotpots.
- ❖ Share this information with stakeholders to allow targeting of limited resources to areas with greatest need within the County.

TARGET DATA SETS

1. VITAL STATISTICS

Death Data

Disease
Indicator

Birth Data

Maternal
Child
Health

2. HOSPITAL DISCHARGE DATA
(Utilization)

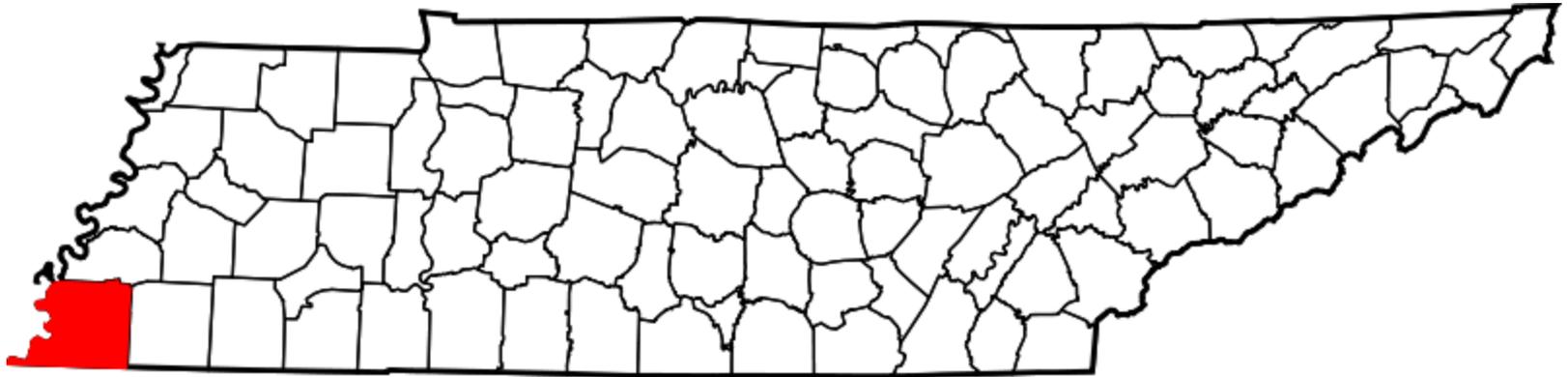
3. CENSUS TRACT DATA
(Population and social determinants)

4. REVENUE DATA
(Health Behavior)

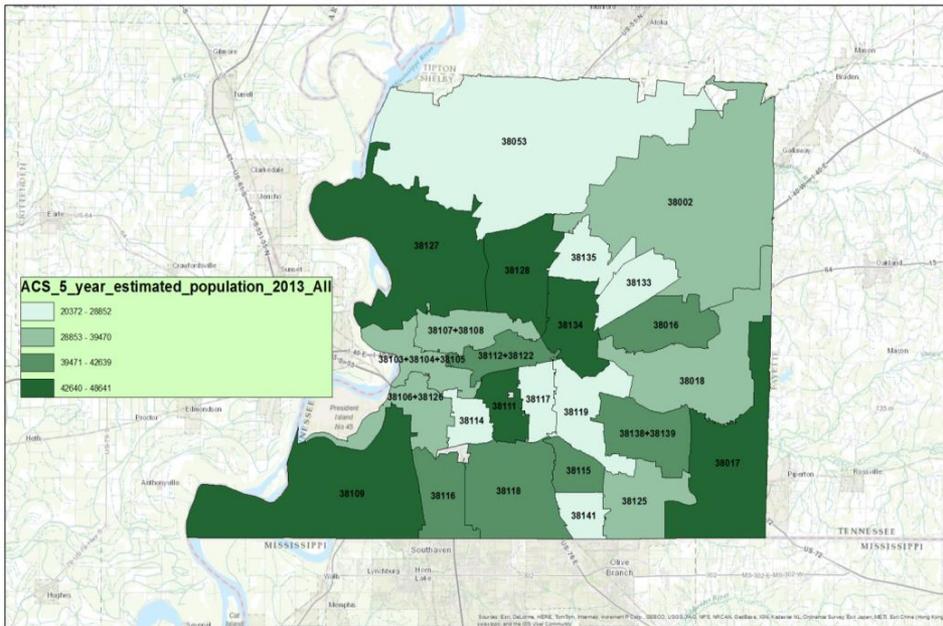
5. SYNDROMIC SURVEILLANCE
DATA
(Utilization)

6. OTHER DATA SOURCES

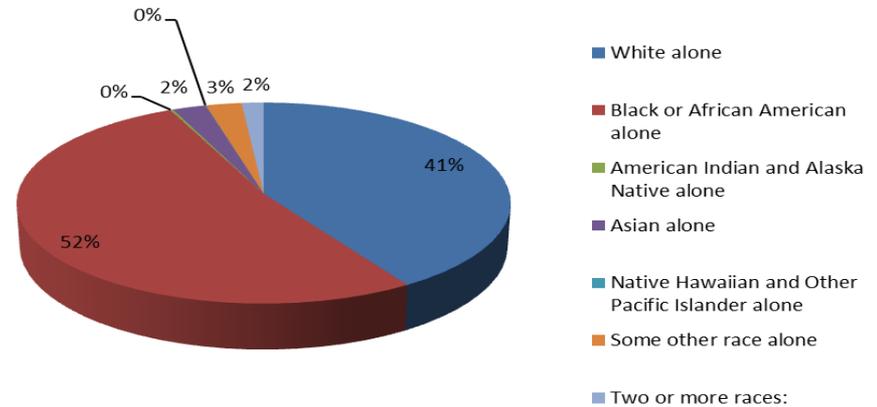
ABOUT SHELBY COUNTY TN



Population Distribution in Shelby County TN, 2013



Race Distribution in Shelby County TN 2013





Public Health
Prevent. Promote. Protect.

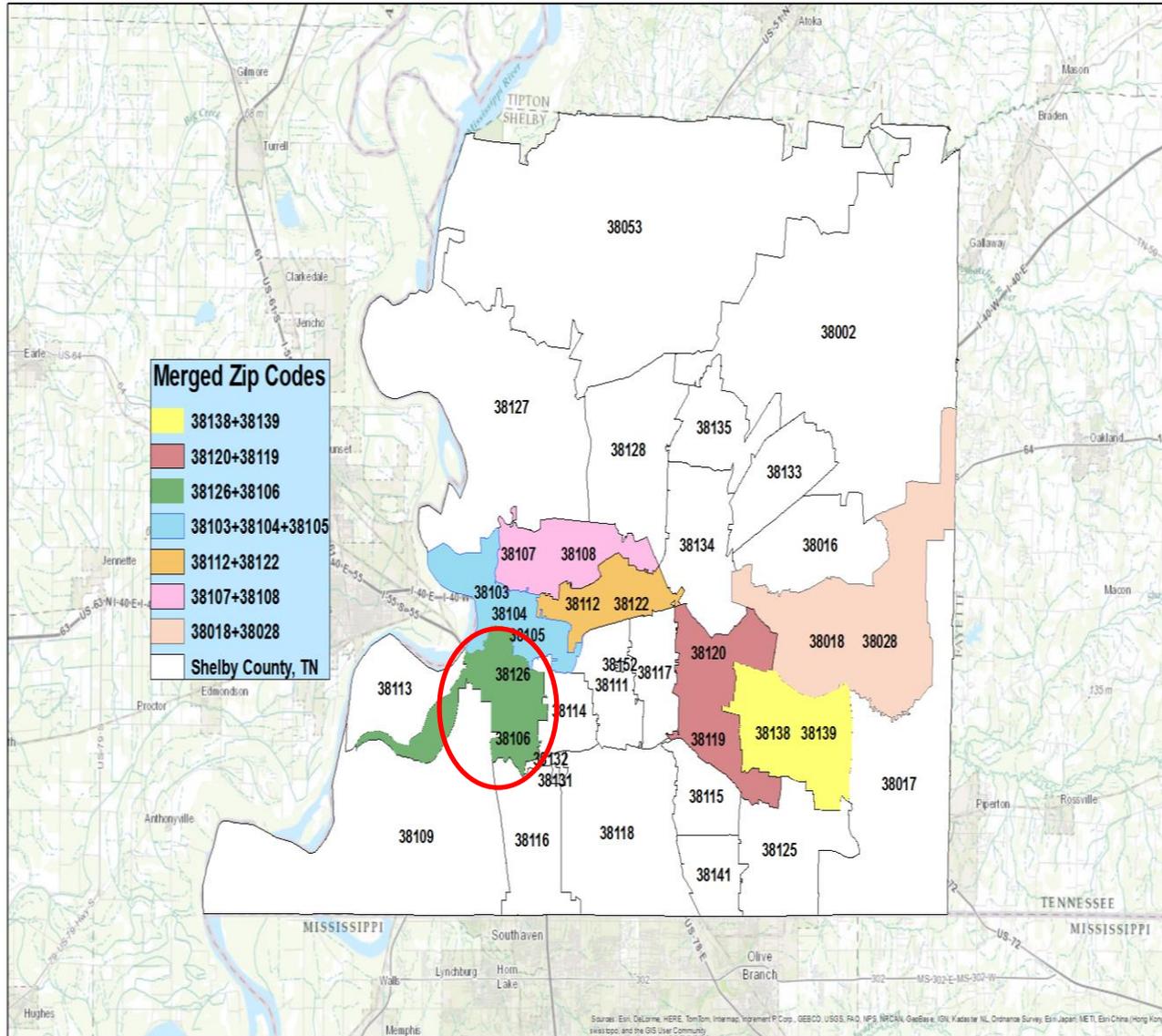
Shelby County Health Department

Quick Facts About Shelby County

- ❖ Shelby County Population ~ 940,000.
- ❖ Approximately 7500 people die in Shelby County each year.
- ❖ To comply with HIPAA the sub-county/zip code level population =>20,000.
- ❖ 9/33 Zip Codes in Shelby County did not meet this criteria.

MERGED ZIP CODES

Merged Zip Codes in Shelby County, TN

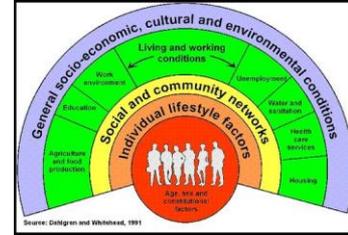


	ZipCode	Total Population(2010)
1	38002	38927
2	38016	43079
3	38017	45512
4	38018	35059
5	38028	3746
6	38053	27932
7	38103	12180
8	38104	23409
9	38105	6184
10	38106	27222
11	38107	17698
12	38108	18729
13	38109	46594
14	38111	41742
15	38112	17472
16	38114	26905
17	38115	39129
18	38116	40404
19	38117	26125
20	38118	41465
21	38119	22330
22	38120	14237
23	38122	25270
24	38125	36150
25	38126	7334
26	38127	45248
27	38128	44863
28	38133	20786
29	38134	41948
30	38135	30657
31	38138	24045
32	38139	16086
33	38141	22462

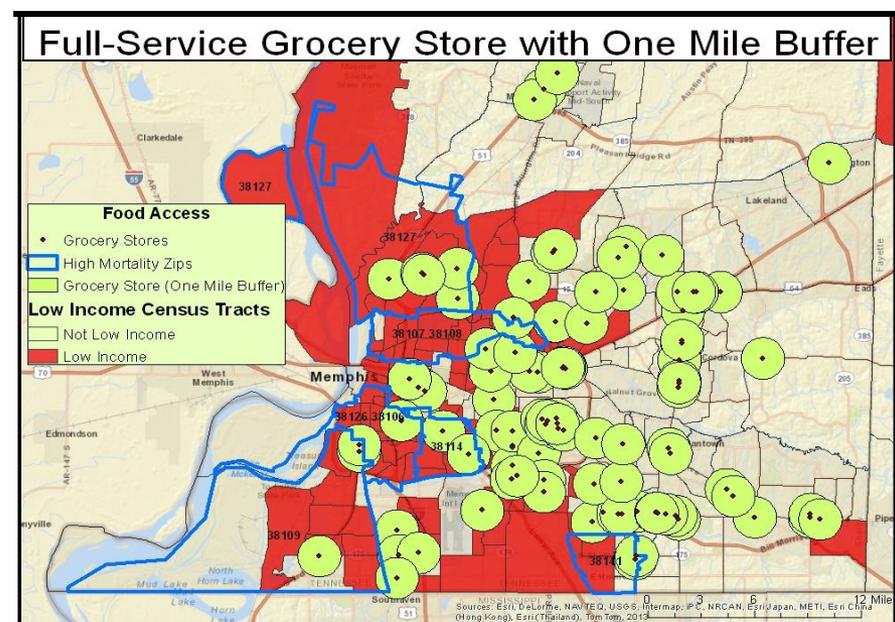
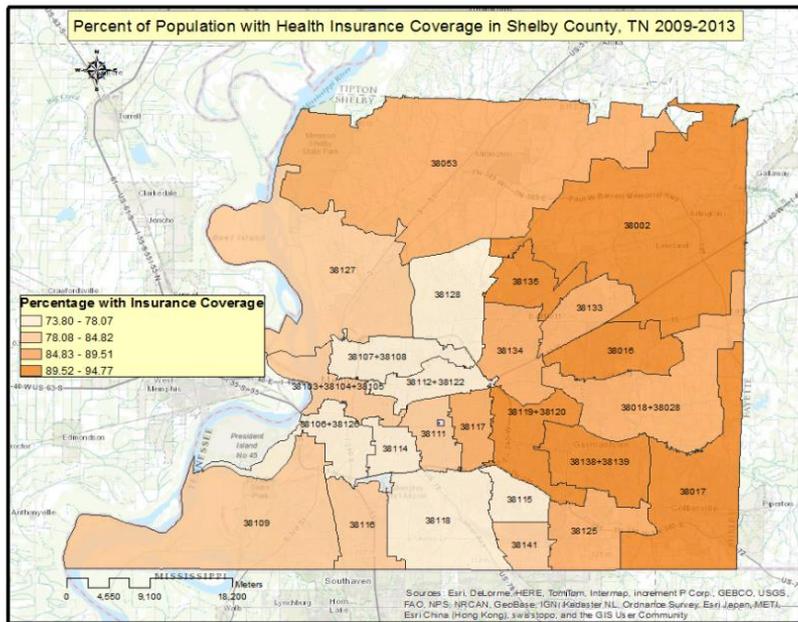
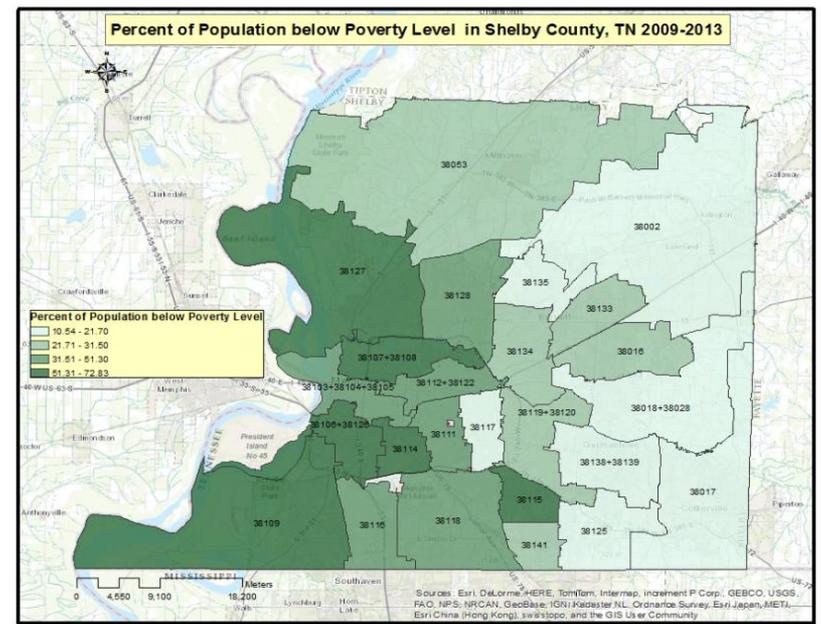
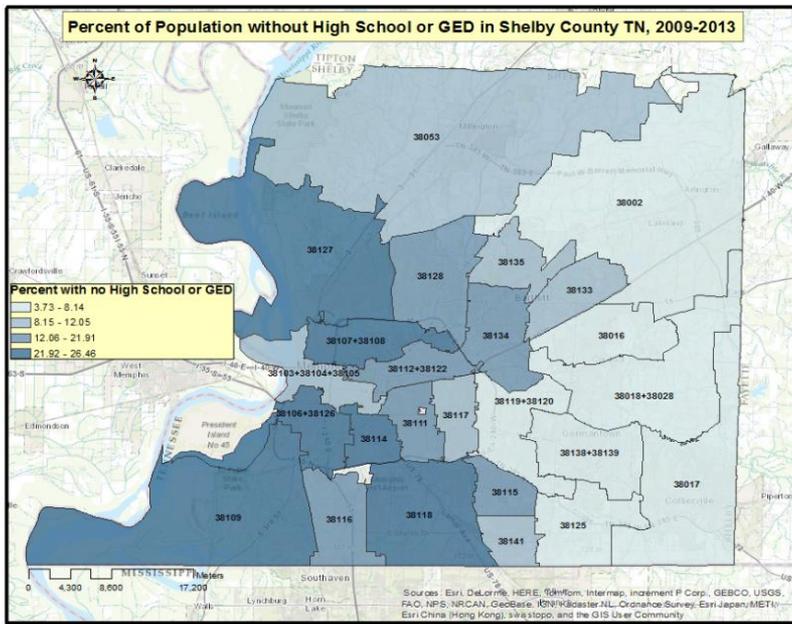


Public Health
Prevent. Promote. Protect.

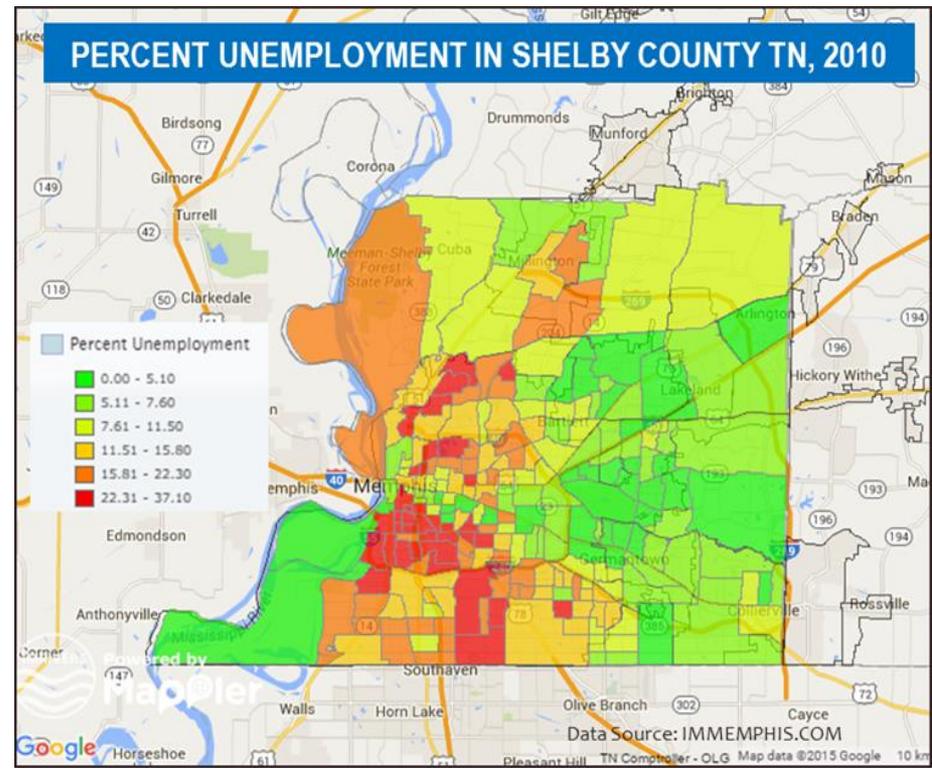
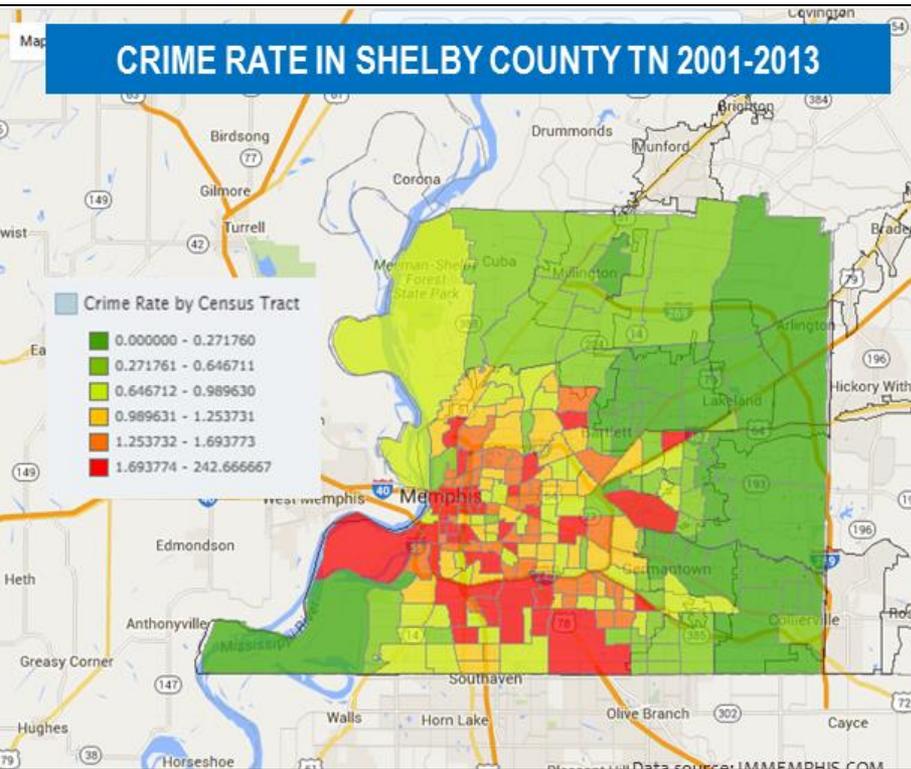
Shelby County Health Department



SOCIAL DETERMINANTS IN SHELBY COUNTY 2009-2013



OTHER SOCIAL DETERMINANTS





Public Health
Prevent. Promote. Protect.

Shelby County Health Department



HEALTH- RISK BEHAVIOR



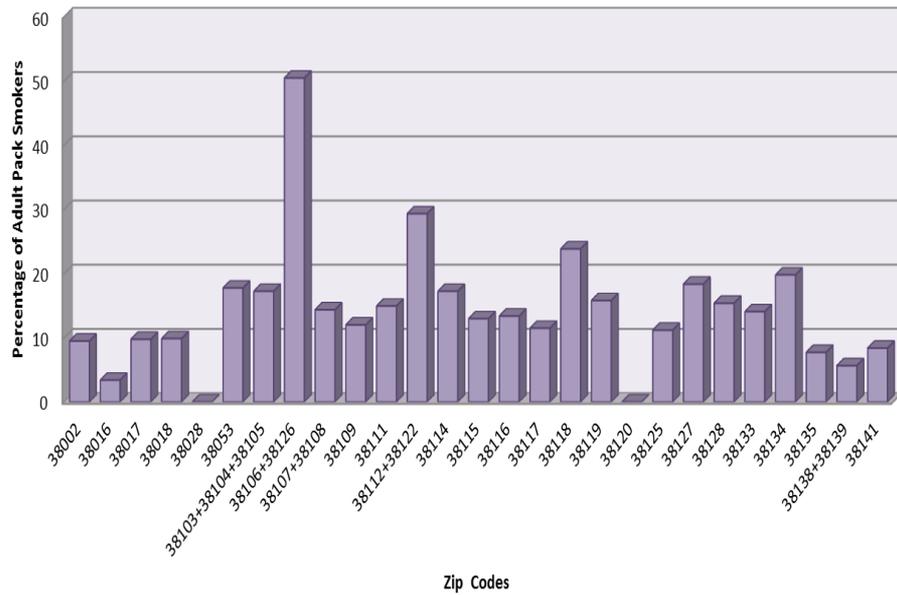
Public Health
Prevent. Promote. Protect.

Shelby County Health Department

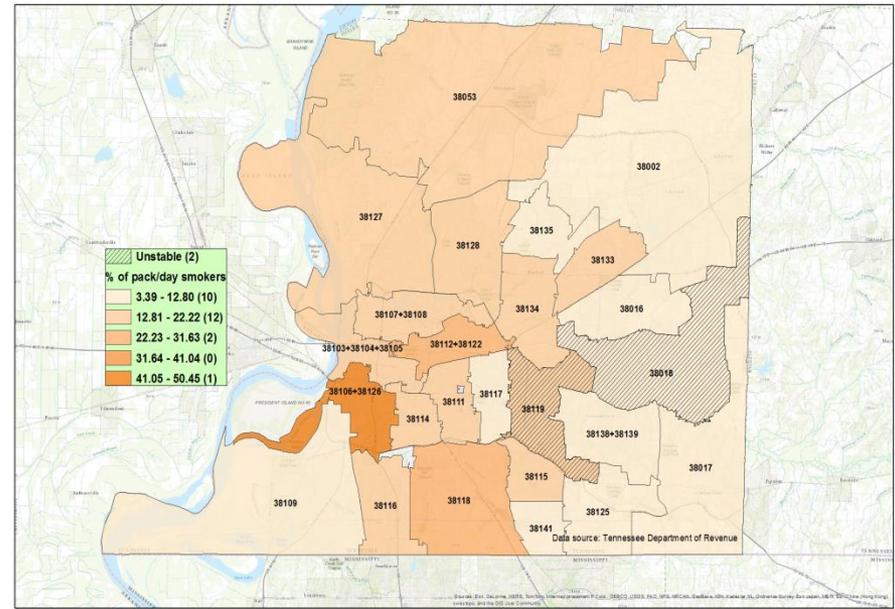
Quick Facts About Tobacco Use in Shelby County TN.

- ❖ Smoking is considered a risk factor for various chronic diseases.
- ❖ In 2013, Shelby county residents spent over **\$233 million** in Cigarettes and Other tobacco products sales.
- ❖ Of the \$233 million, **\$201 million** was on cigarette sales only.
- ❖ A pack of cigarette costs **\$5.30** in Shelby County.
- ❖ An average smoker in Tennessee, smokes a pack of cigarettes per day.
- ❖ A pack a day smoker, spends **\$1935** a year on cigarettes.
- ❖ **14%** of Adults in Shelby County Smoke.

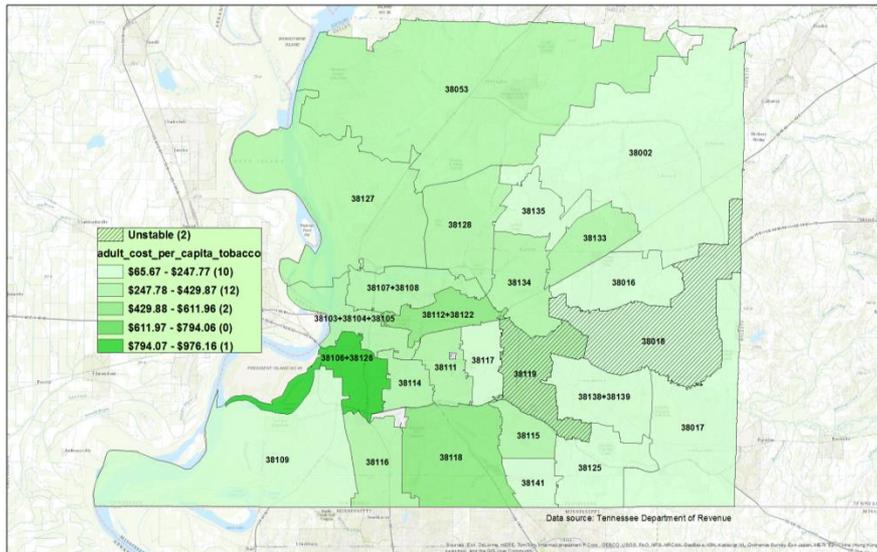
% of Adult pack/day smokers in Shelby County Tennessee



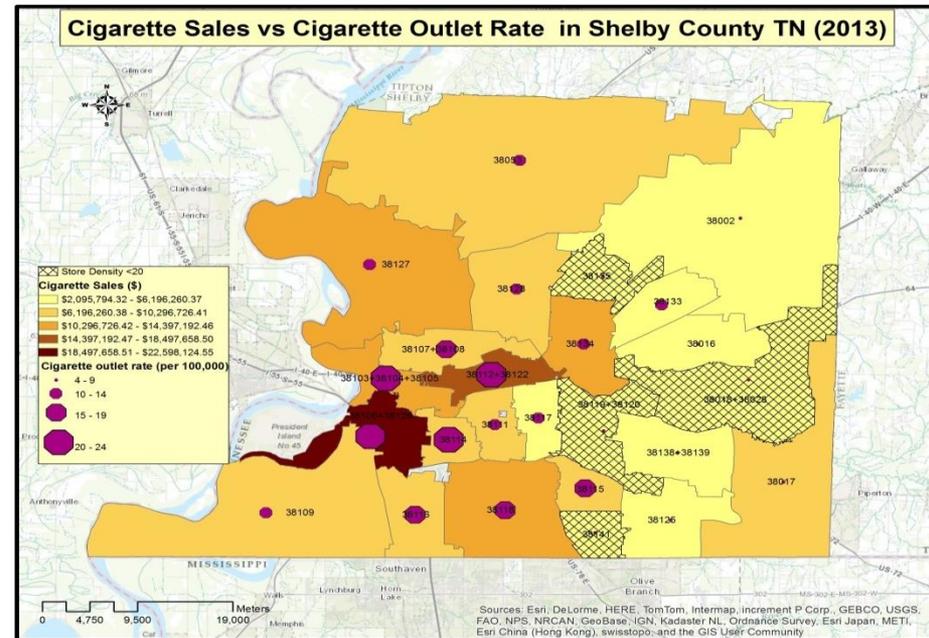
Percentage of Adult Pack/Day Smokers in Shelby County TN, 2013



Cigarette Sales per Capita in Shelby County TN (Adults only)



Cigarette Sales vs Cigarette Outlet Rate in Shelby County TN (2013)





Public Health
Prevent. Promote. Protect.

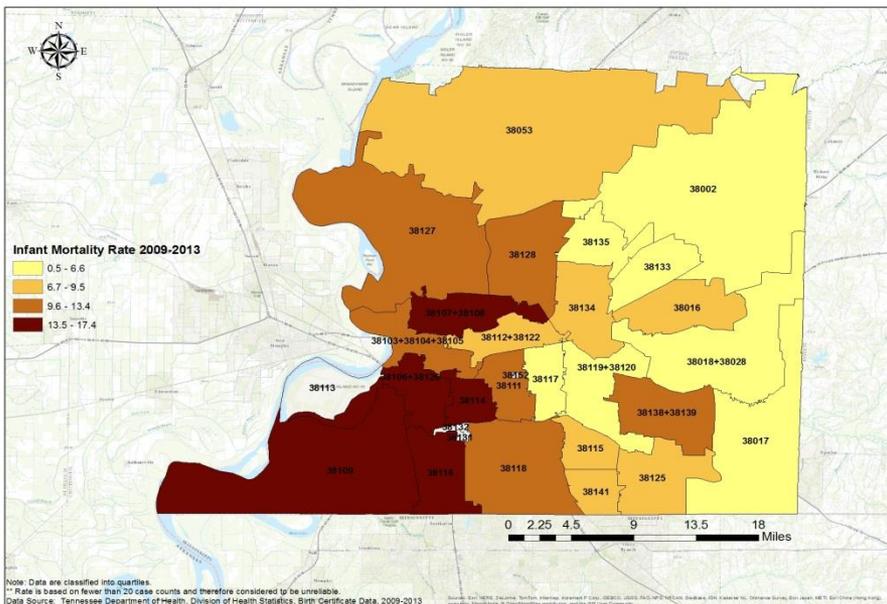
Shelby County Health Department



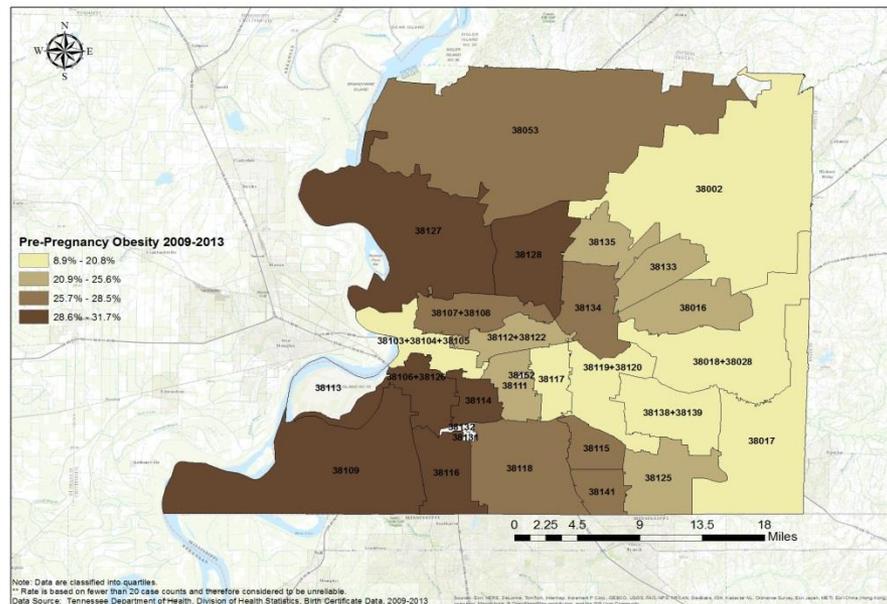
MATERNAL CHILD HEALTH



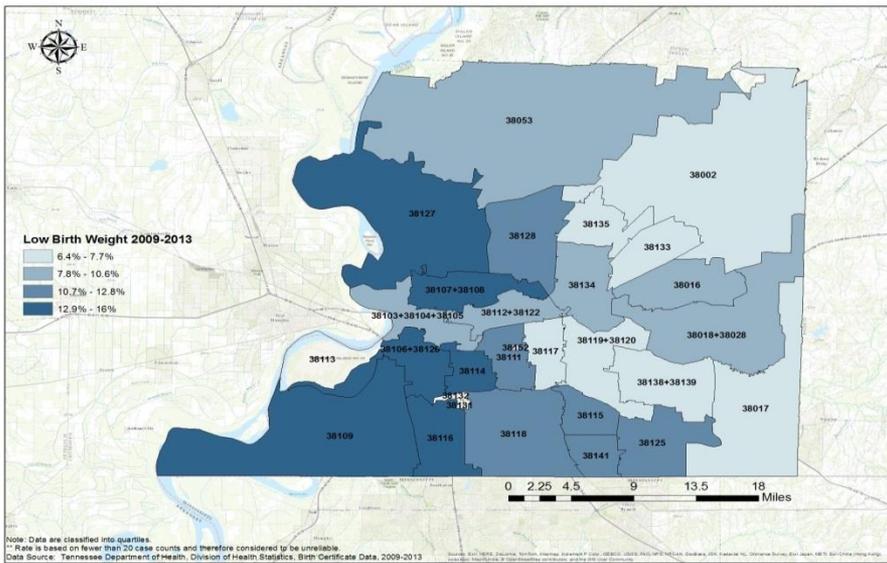
Infant Mortality Rate by ZipCode, Shelby County, 2009-2013



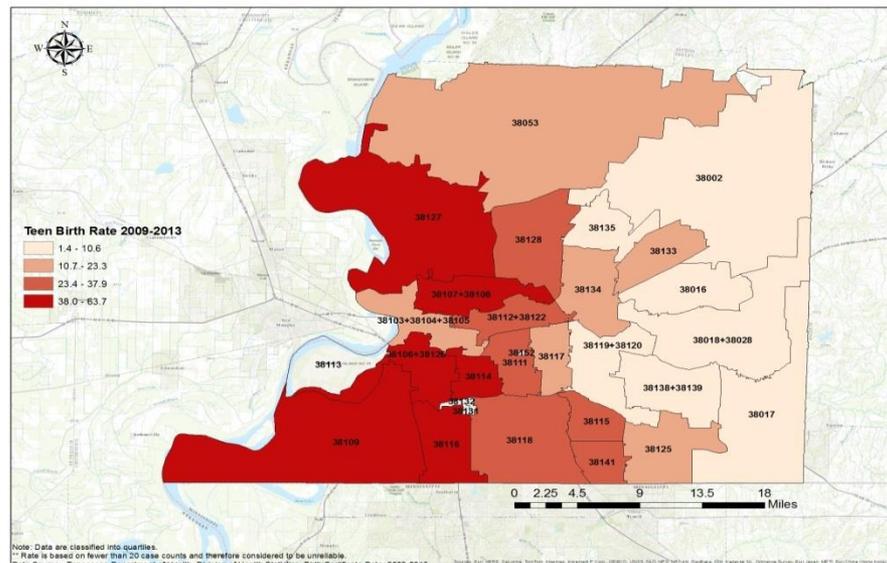
Percent of Moms with Pre-Pregnancy Obesity by ZipCode, Shelby County, 2009-2013



Low Birth Weight by ZipCode, Shelby County, 2009-2013



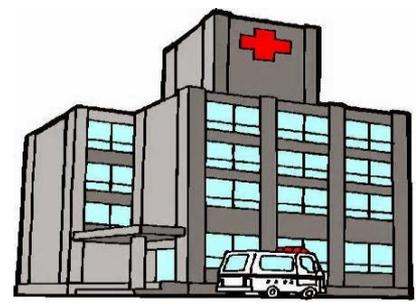
Teen Birth Rate Ages 10-19 by ZipCode, Shelby County, 2009-2013





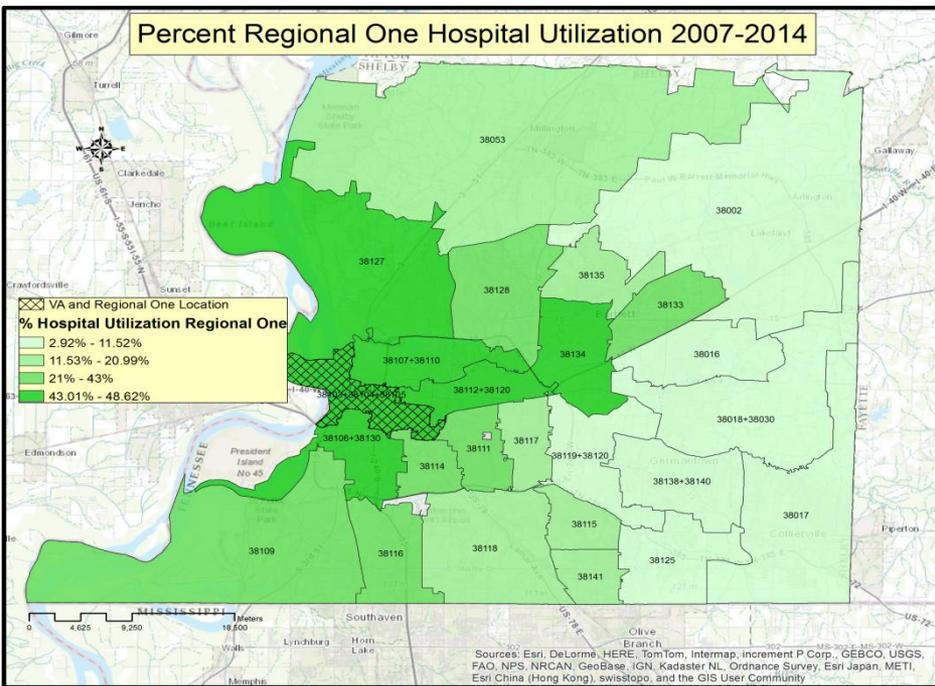
Public Health
Prevent. Promote. Protect.

Shelby County Health Department

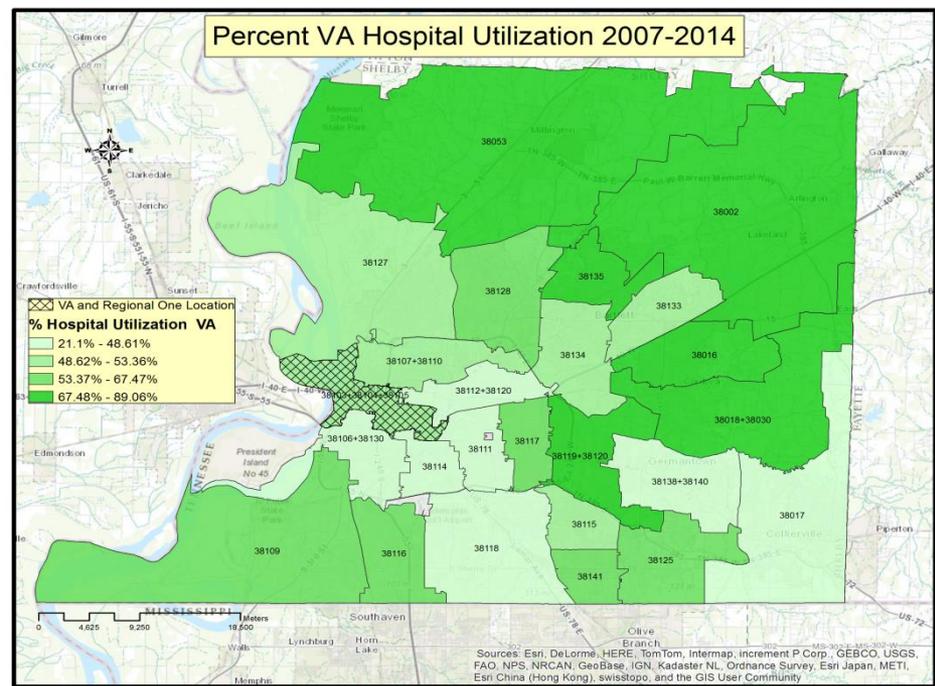


HOSPITAL UTILIZATION

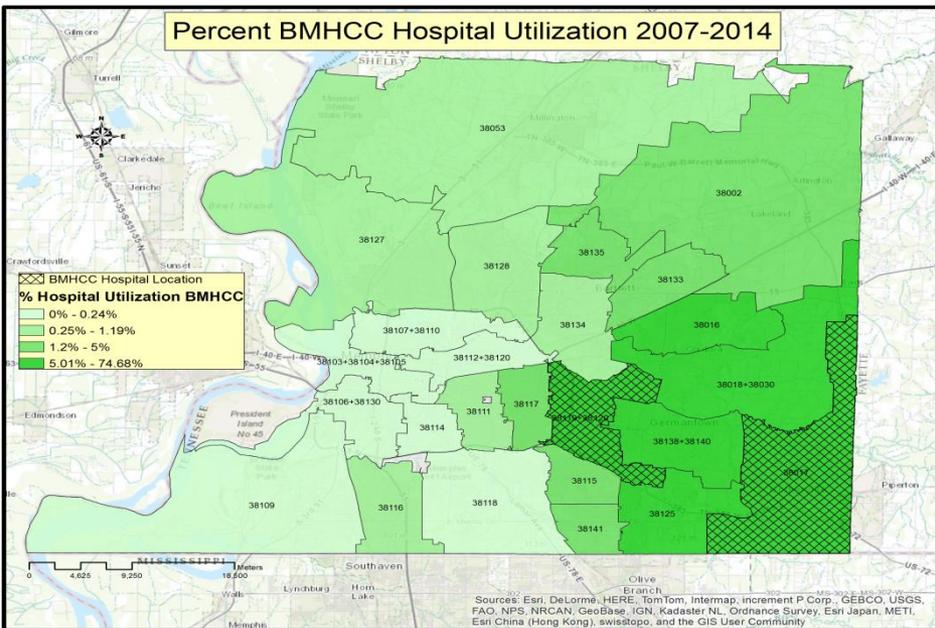
Percent Regional One Hospital Utilization 2007-2014



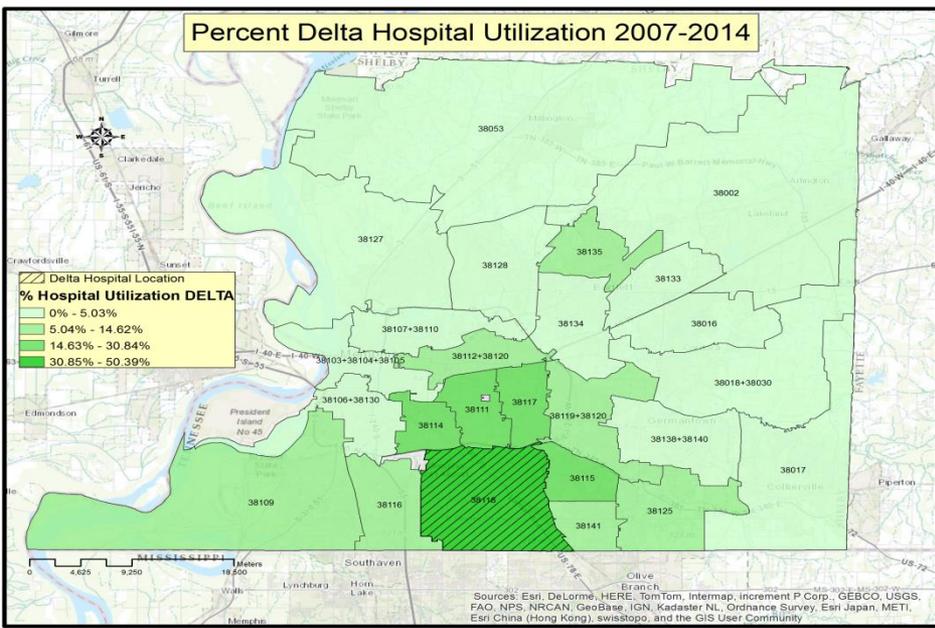
Percent VA Hospital Utilization 2007-2014



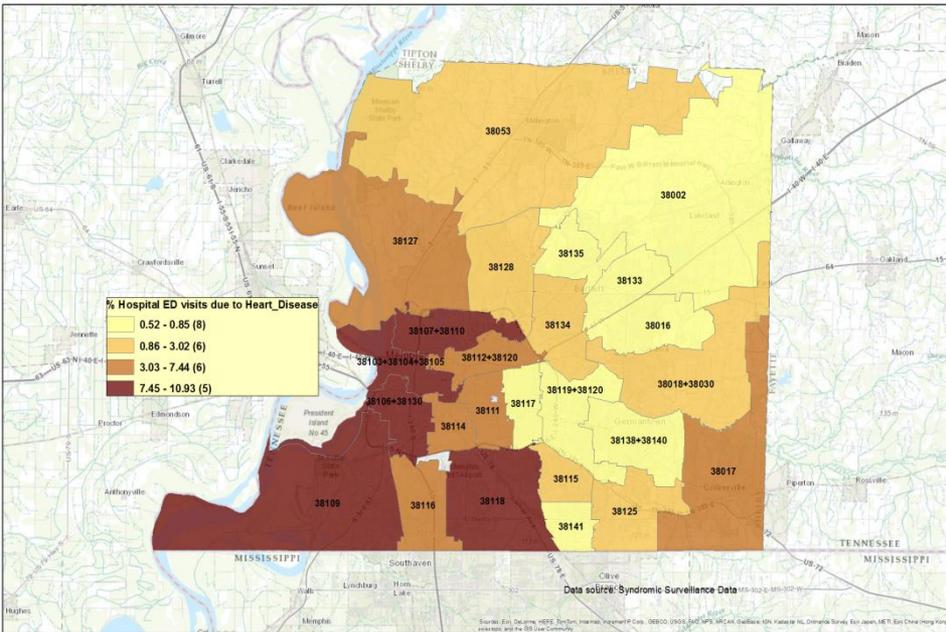
Percent BMHCC Hospital Utilization 2007-2014



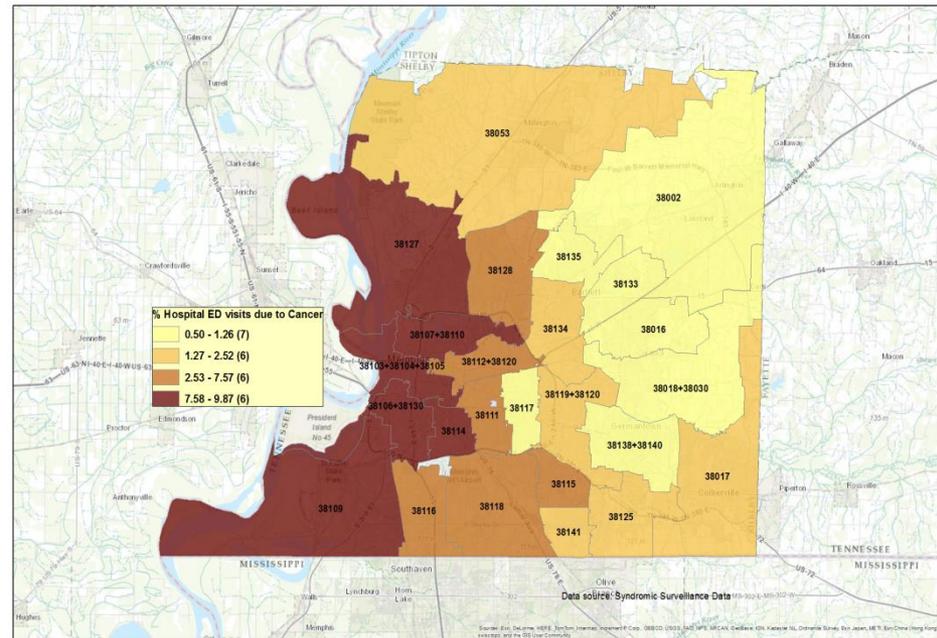
Percent Delta Hospital Utilization 2007-2014



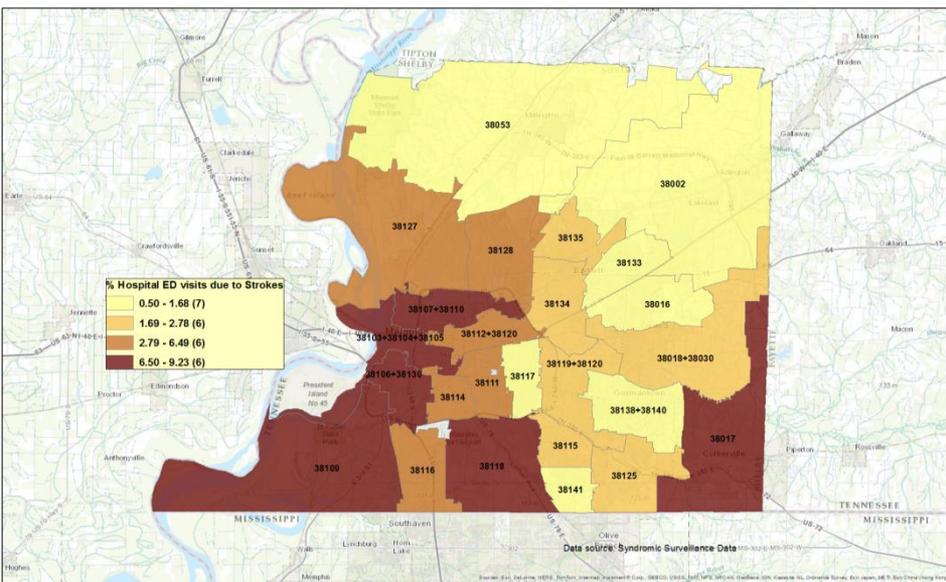
Percent ED Visits due to Heart Disease in Shelby County 2007-2014



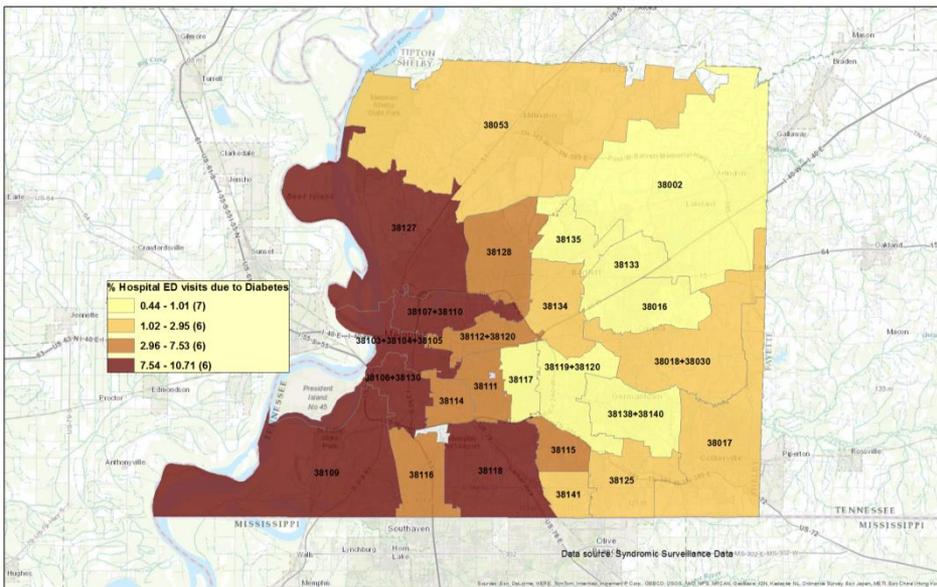
Percent ED Visits due to Cancer in Shelby County 2007-2014



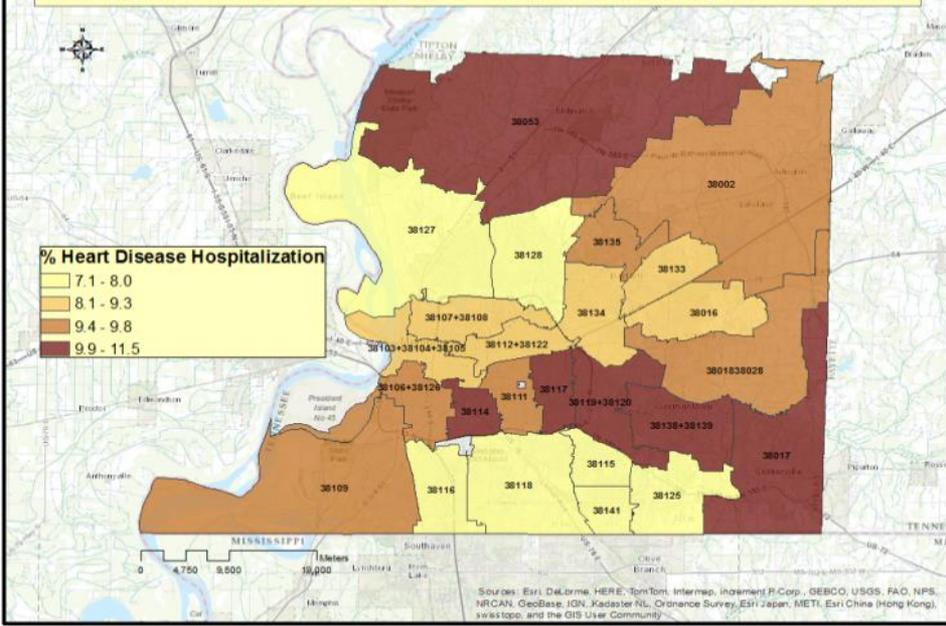
Percent ED Visits due to Strokes in Shelby County 2007-2014



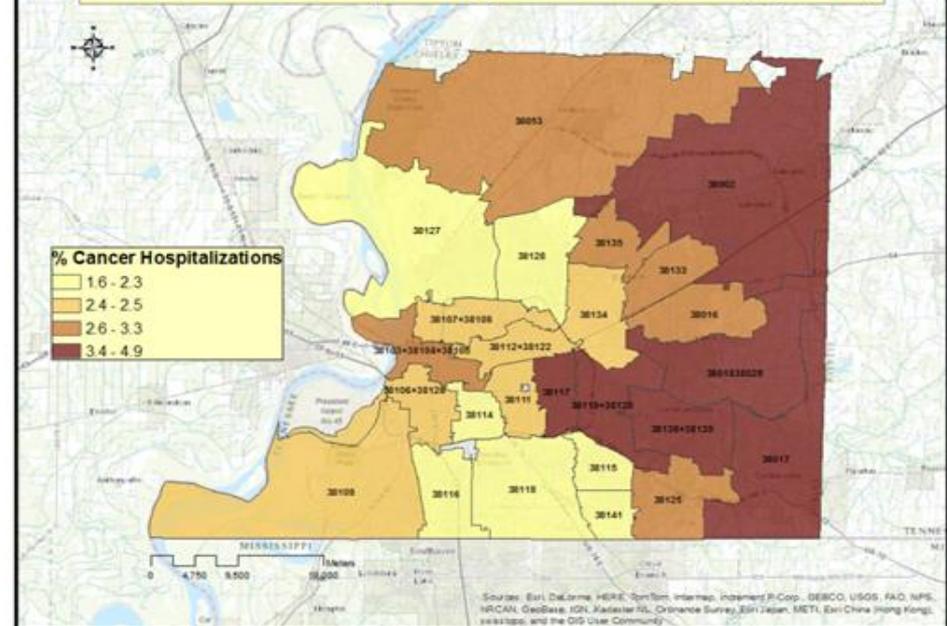
Percent ED Visits due to Diabetes in Shelby County 2007-2014



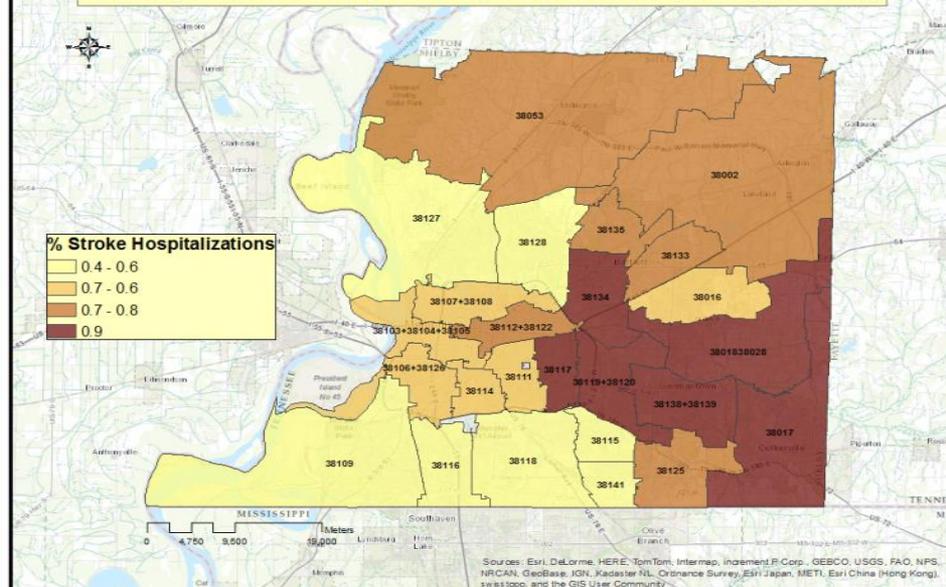
Percentage of Total Heart Disease Inpatient Hospitalization in Shelby County (2009-2013)



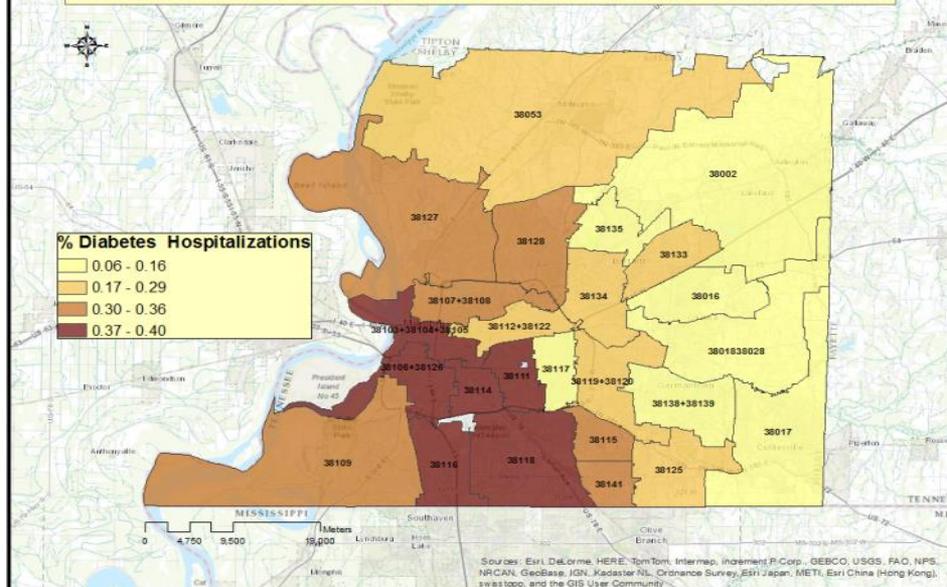
Percentage of Total Cancer Inpatient Hospitalization in Shelby County (2009-2013)

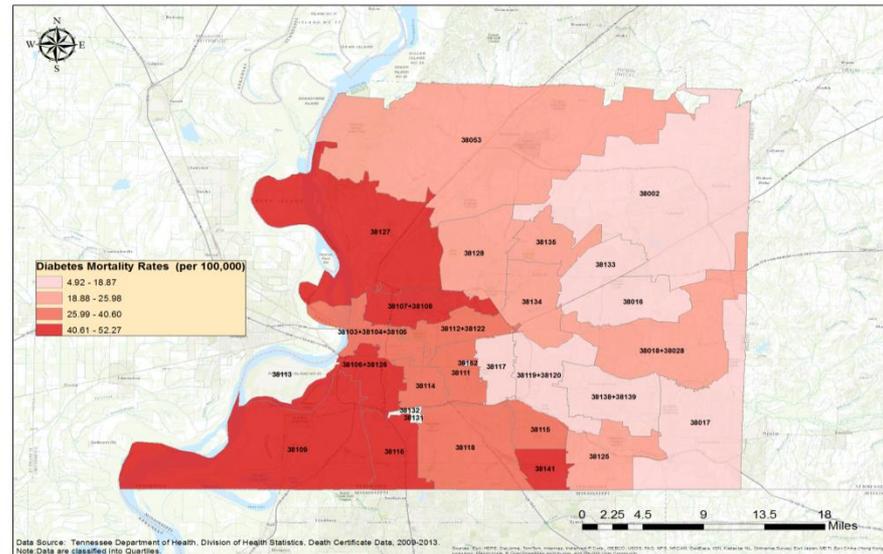
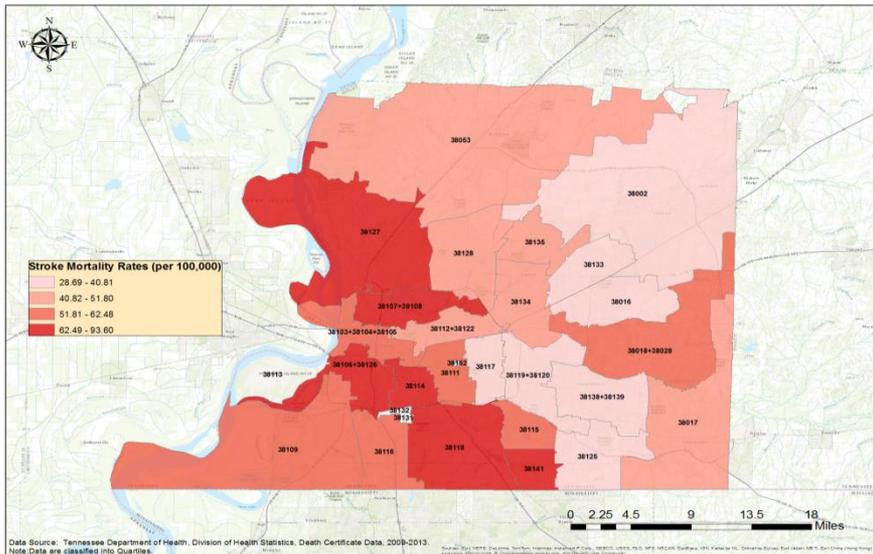
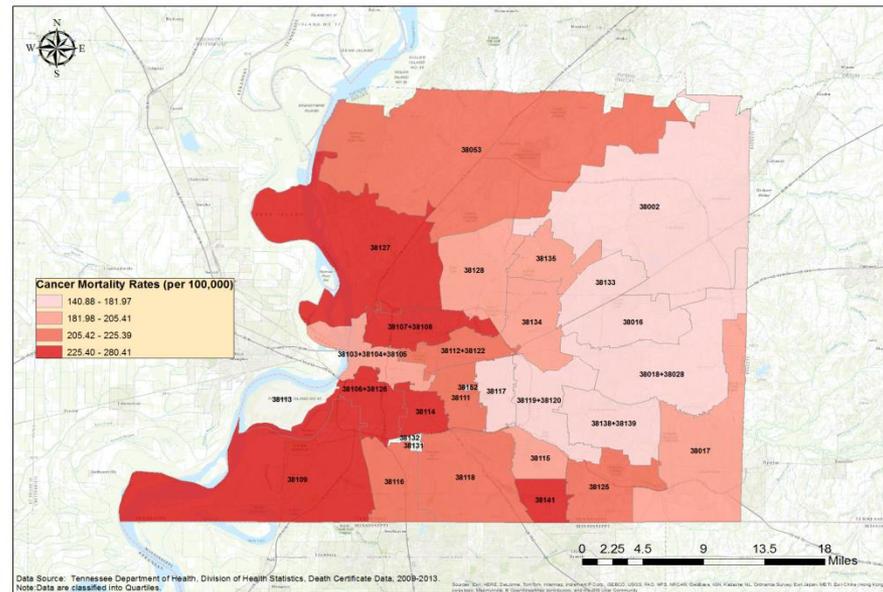
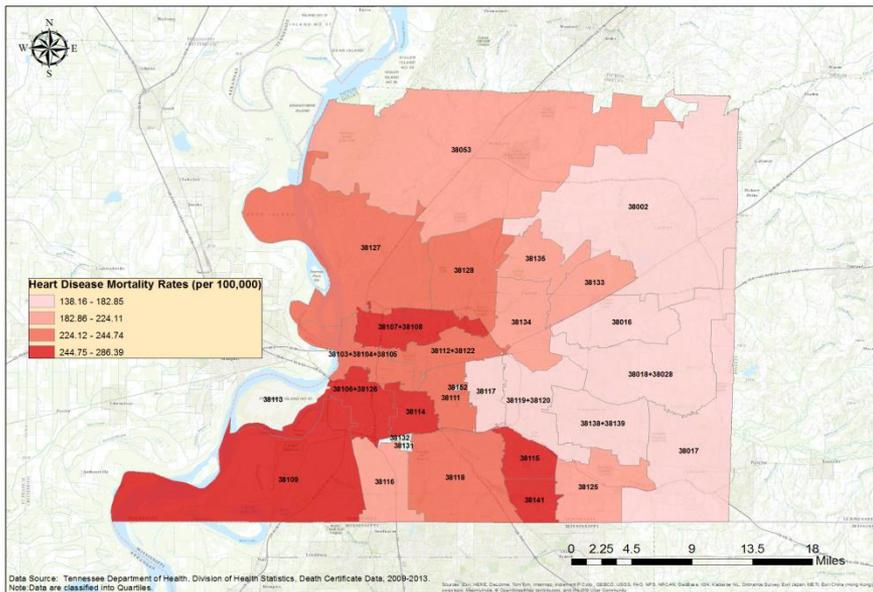


Percentage of Total Stroke Inpatient Hospitalization in Shelby County (2009-2013)



Percentage of Total Diabetes Inpatient Hospitalization in Shelby County (2009-2013)







Public Health
Prevent. Promote. Protect.

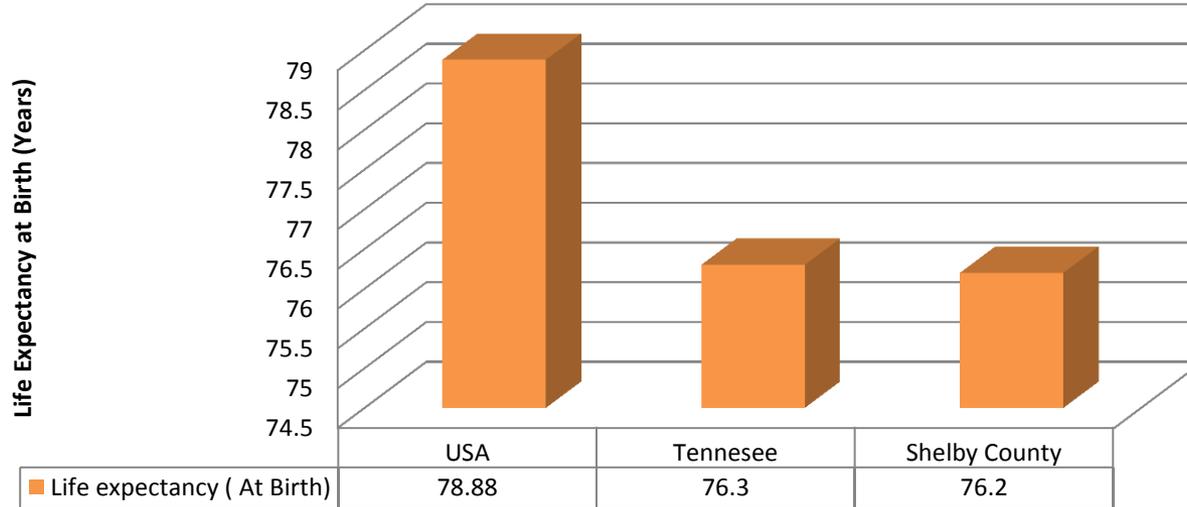
Shelby County Health Department



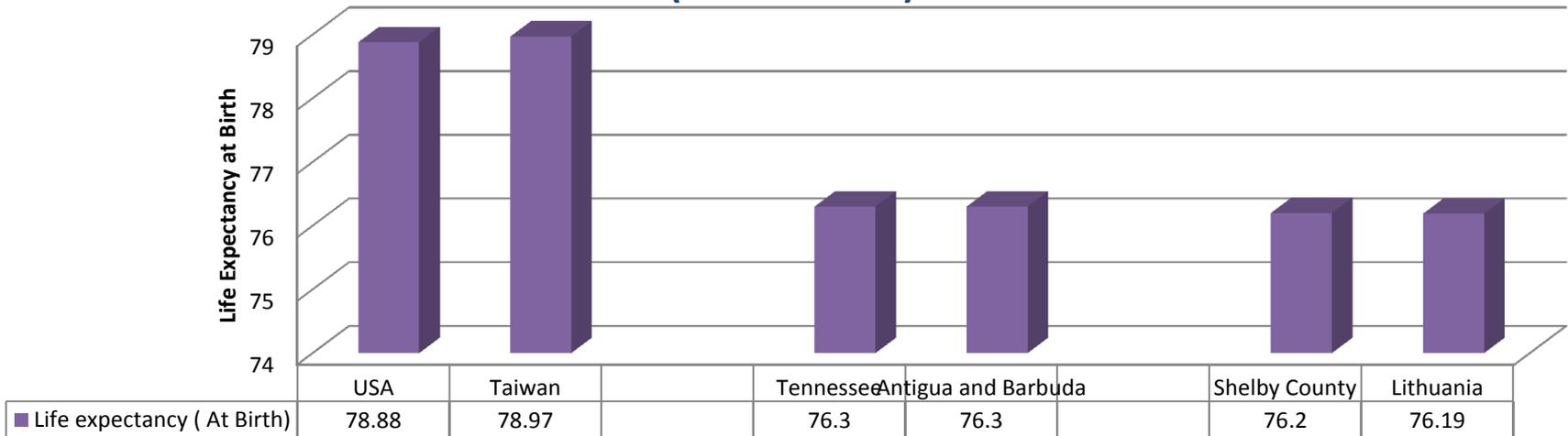
LIFE EXPECTANCY

SCALE PROJECT
(Sub-County Assessment of Life
Expectancy)

Comparison of LE (Country, State, County)



Comparison of LE (US vs World)

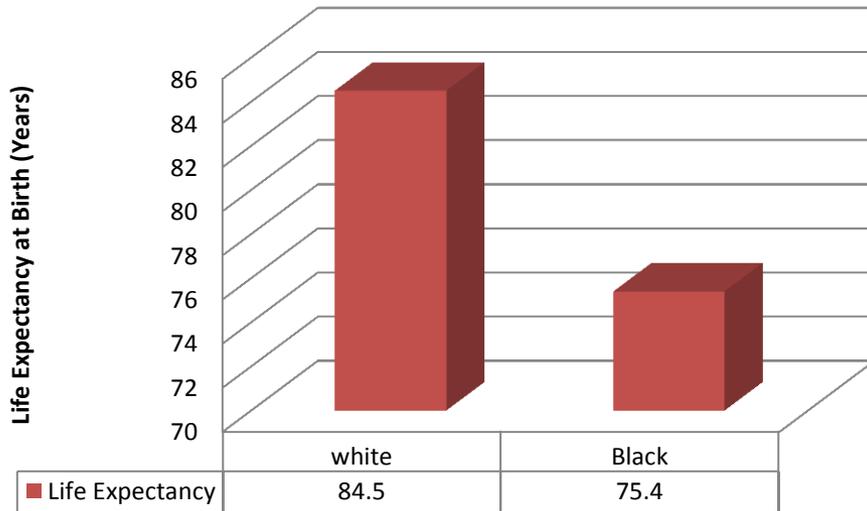


Data Source for World LE: www.geoba.se

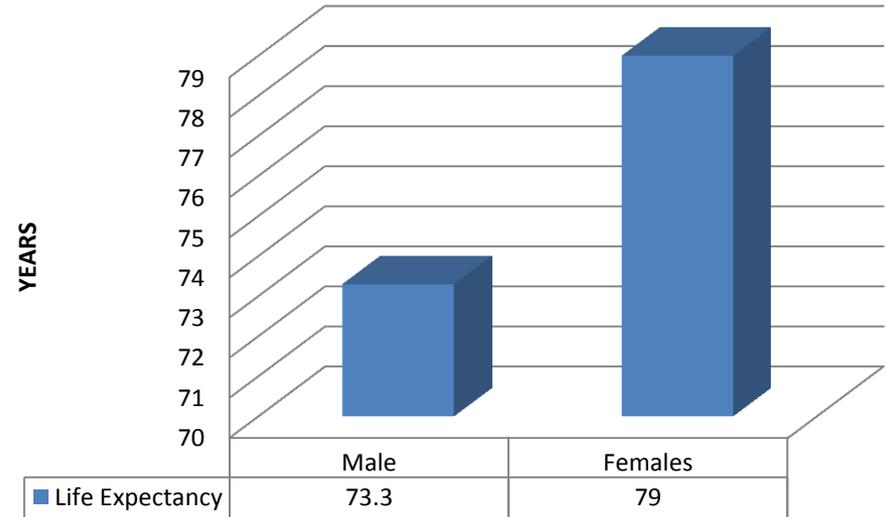
Data Source for USA and States: <http://kff.org/state-category/health-status/life-expectancy/>

Data Source for local LE: Office of Epidemiology and Infectious Diseases, Shelby County Health Department.

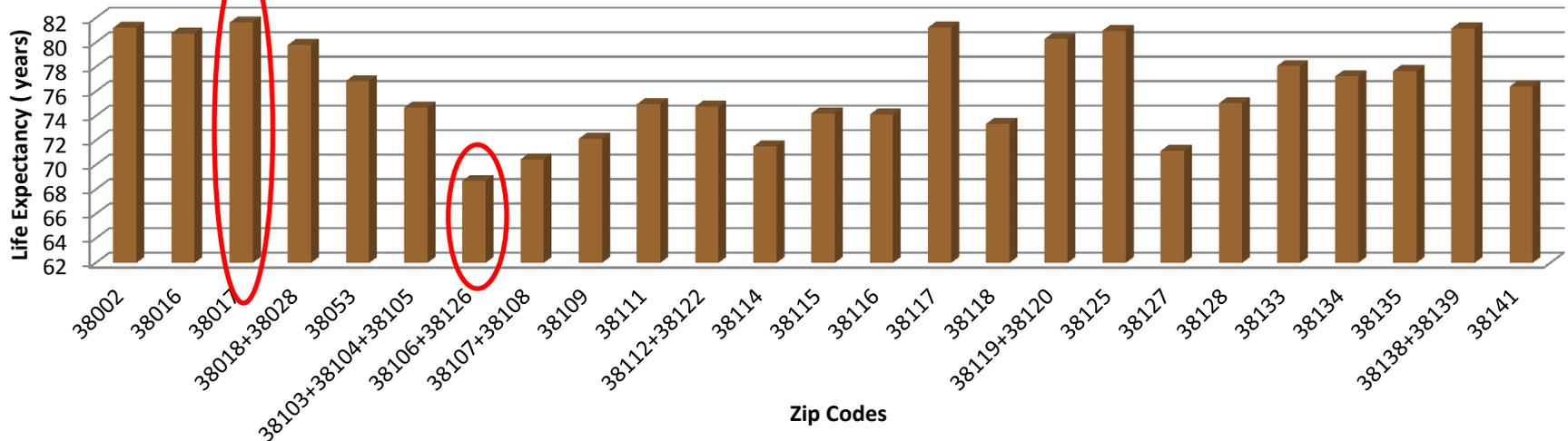
Life Expectancy in Shelby County by Race



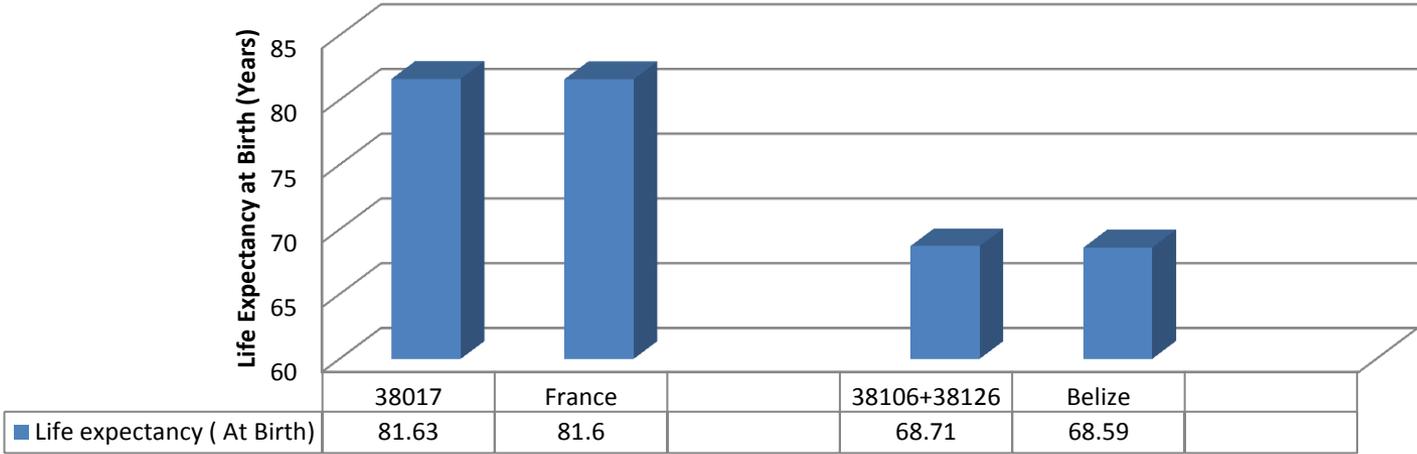
Life Expectancy in Shelby County by Sex



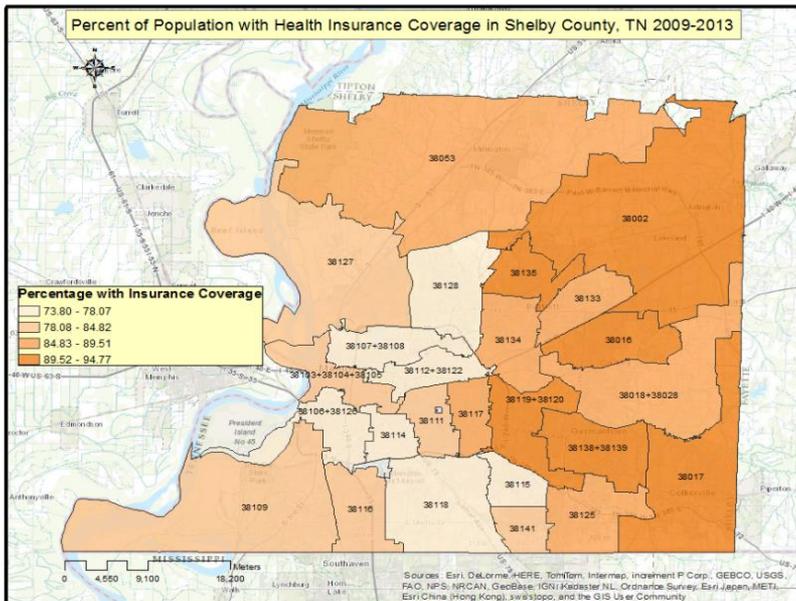
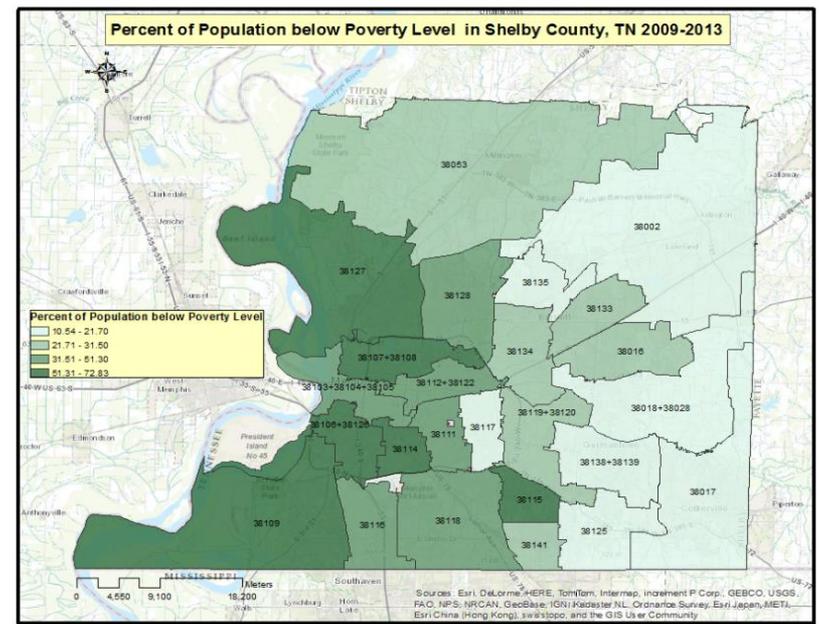
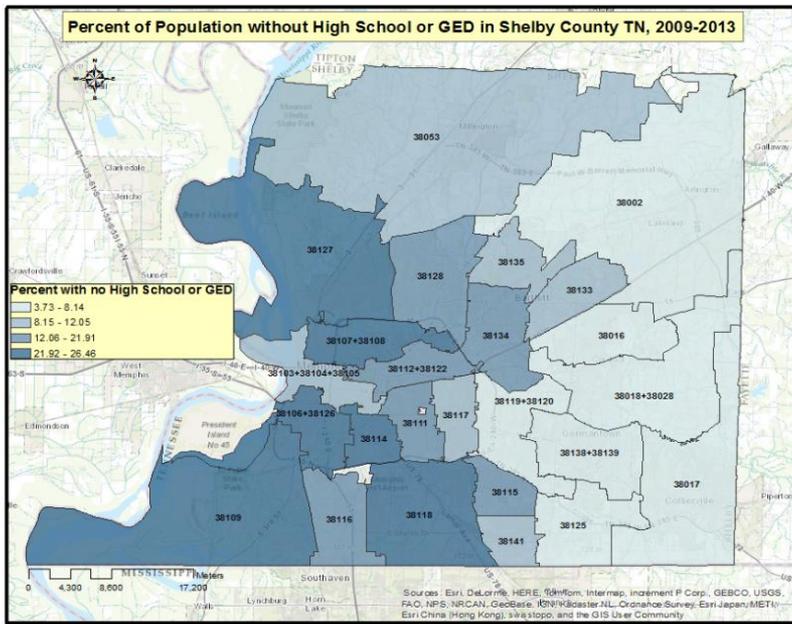
Life expectancy at Birth in Shelby County TN



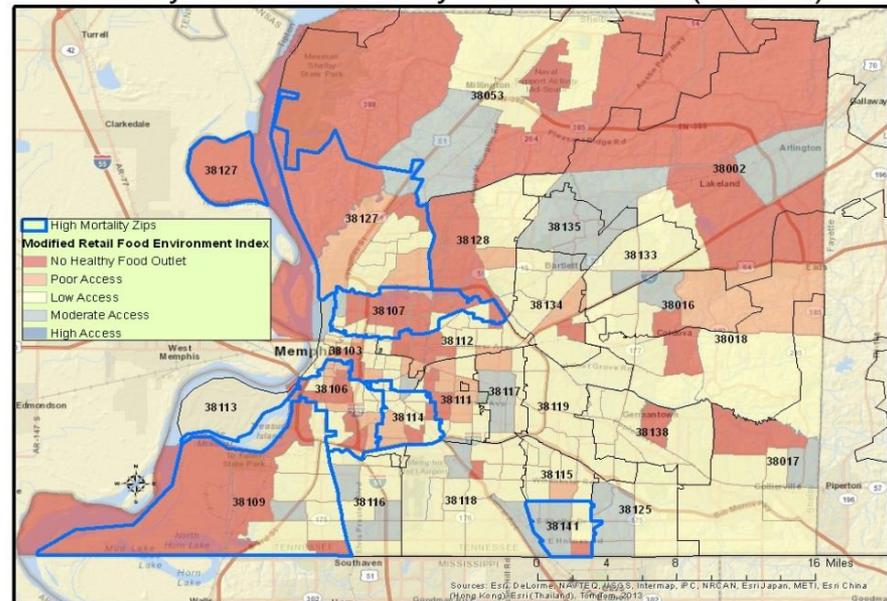
Comparison of LE (Shelby County Zip vs World)



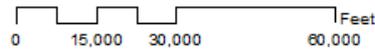
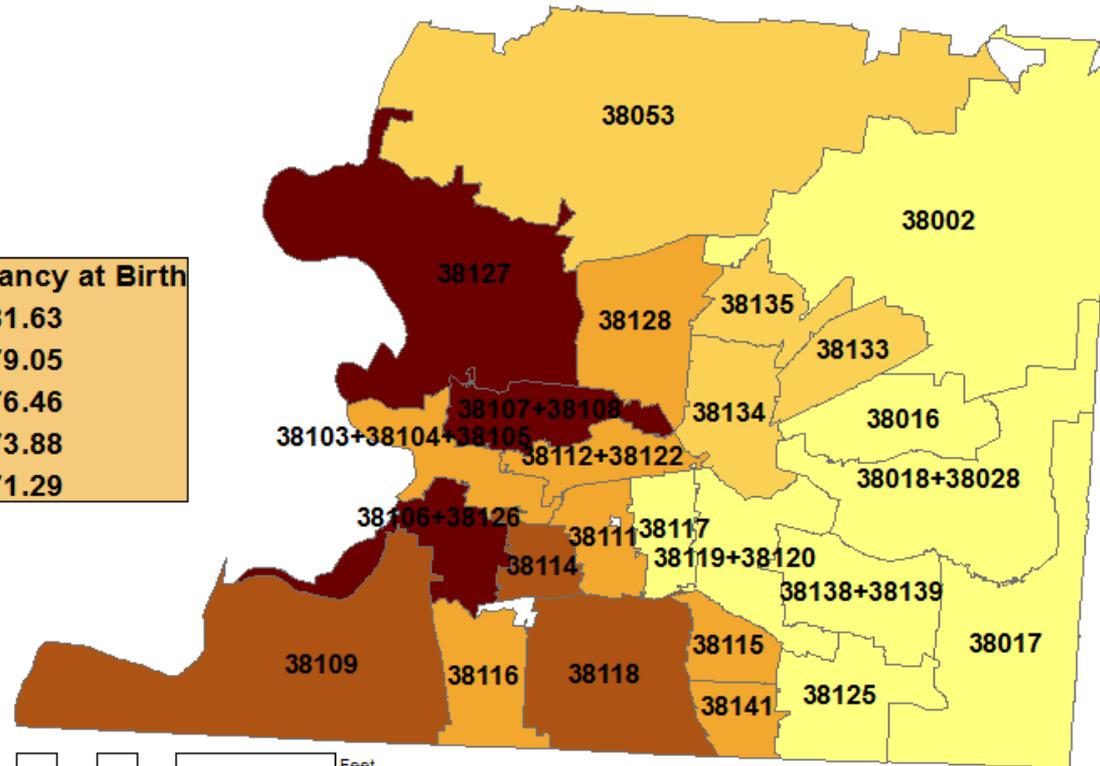
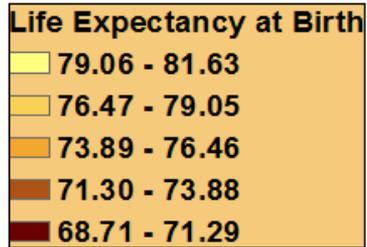
Data Source for World LE: www.geoba.se
 Data Source for local LE: Office of Epidemiology and Infectious Diseases, Shelby County Health Department.



Healthy Food Access by Census Tract (mRFEI)



Life Expectancy at Birth in Shelby County TN 2009-2013





Public Health
Prevent. Promote. Protect.

Shelby County Health Department

CONCLUSION

- ❖ Various data streams are required to identify areas of need.
- ❖ The zip Code **38106** +38126 in Shelby County was identified as a hot spot.
- ❖ This analysis will enable local agencies to be more effective in targeting limited resources to areas with greatest need within the County.



**We can change
the world
and make it a better
place. It is in your hands
to make a difference.**

-Nelson Mandela



Contact Information

David Sweat MPH.

Chief of Epidemiology and Infectious
Diseases

Shelby County Health Department

Email: David.Sweat@shelbycountyttn.gov

Phone: 901-222-9229

Lilian Ogari PhD., MPH.

Chronic Disease Epidemiologist

Shelby County Health Department

Email: lilian.ogari@shelbycountyttn.gov

Phone: 901-222-9236