


MEMORANDUM

January 31, 2019

TO: Health and Human Services Committee

FROM: Linda McMillan, Senior Legislative Analyst 

SUBJECT: **Briefing from Dr. Travis Gayles, County Health Officer,  
Health of the County and the Zip Code Ranking Project**

PURPOSE: Receive presentation from Dr. Gayles

***Expected to attend:***

Dr. Travis Gayles, County Health Officer

At this session, Dr. Gayles will brief the Committee on the report, "Health in Montgomery County 2008-2016" and on the "Zip Code Ranking Project." The Executive Summary from the Health of the County is attached at © 2-7 and provides summary data on demographics, birth rates, leading causes of death, maternal and infant health, chronic disease, infections disease, behavioral health and injury. This data is the basis for some specific issues that Dr. Gayles has discussed with the Council, including increasing rates of certain sexually transmitted infections and disparities in infant mortality and maternal morbidity. The following is a link to the full report:

<https://www.montgomerycountymd.gov/HHS/Resources/Files/Reports/PopHealthReportFINAL.pdf>

Dr. Gayles will also present the report on health outcomes by zip code, based on data from 2014 through 2016. The slide presentation is attached at © 8-55. DHHS has collected data on a range of measures to see how health and longevity is impacted for residents in certain zip codes. As noted in the slides, this can "inform targeted resource allocation to improve health 'hot spots' around the county." The following is a link to the slide presentation.

<https://www.montgomerycountymd.gov/HHS/Resources/Files/Reports/Zipcode%20Ranking%20Final%20Results.pdf>

The Committee may be interested in hearing from Dr. Gayles how this work is informing the County's efforts to implement a "Health in All Policies" approach and how resource allocated will be coordinated with the efforts of the minority health program/initiatives and other community-based efforts.



# HEALTH

## IN MONTGOMERY COUNTY

### 2008-2016

A Surveillance Report on Population Health





Overall, health outcomes in Montgomery County have performed better than state and national averages. Nevertheless, a close examination of the overall averages reveals several health conditions with increasing trends, and disparities by race/ethnicity, age, sex, and geographic area warrant special attentions. It is critical to highlight these areas, to target efforts and resources to meet the evolving needs of a changing population in the County. The major findings of health topics examined in this report are summarized below.

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## Demographics, Social Determinants, and Health Care Access

- (1) The County's population is becoming more diverse over time; the NH-Black and Hispanic populations have increased while the NH-White population is decreasing.
- (2) In 2016 an increasing percentage of families living in poverty in the County; however, the County's overall level (4.7%) is lower than Maryland's (6.8%) and much lower than that of the U.S. (11.0%); the Hispanic and NH-Black groups had the highest levels.
- (3) The overall percentage of individuals without health insurance in the County has decreased over time, which is similar to Maryland and the U.S.

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## Vital Statistics

- (1) Births to adolescent mothers in the County are decreasing over time, the County's rates are consistently lower than those in Maryland and the U.S; Hispanics had the highest rates.
- (2) The leading causes of death in the County were cancer (24%), heart disease (22%), cerebrovascular disease (5%), accidents (4%), and chronic lower respiratory disease (3%).
- (3) The County had decreasing rates of overall mortality, the death rates were consistently lower than that in Maryland and the U.S.

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## Maternal and Infant Health

- (1) The County had an overall decreasing trend in the percentage of births with late or no prenatal care; the County percentage is consistently lower than that in Maryland.
- (2) Low birth weight in the County has been consistently lower than that in Maryland and the U.S (7.2%, 8.6%, and 8.2% of births, respectively in 2016); NH-Black had the highest percentage.
- (3) The infant mortality rate in the County is consistently lower than that in Maryland and the U.S (5.3, 6.7, and 5.9/1,000 births respectively in 2015); NH-Black had the highest rates.



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**Chronic Disease**

- (1) Though heart disease mortality had decreased in the County, heart disease related ER visits rates increased; however, the County had lower rates of mortality and ER visit than in Maryland. NH-Blacks had the highest mortality and ER visit rates.
- (2) Overall cancer incidence and mortality rates are decreasing in the County. County rates are lower than those in Maryland and the U.S.
- (3) While diabetes mortality showed a decreasing trend in the County, diabetes related ER visits rates increased. The County had lower mortality and ER visit rates than Maryland. NH-Blacks had the highest mortality and ER visit rates.

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**Infectious Disease**

- (1) Tuberculosis rates in the County were consistently higher than in Maryland and the U.S. (7.1, 3.7, and 2.9/100,000 respectively in 2016); Asian/PI had the highest rates.
- (2) Though the rates of sexually transmitted infections of chlamydia, gonorrhea, and syphilis were consistently lower than in Maryland and the U.S., the rates in the County increased over time; NH-Blacks and person ages 20-24 (25-44 for syphilis) had the highest rates.
- (3) HIV rates in the County decreased over time and were consistently lower than in Maryland but higher than the U.S. (14.5, 18.6, and 10.8/100,000 respectively in 2016). NH-Blacks had the highest rates.

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**Behavioral Health**

- (1) Though consistently lower than in Maryland, mental health related ER visit rates in the County increased over time; NH-Blacks and persons ages 18-34 had the highest rates.
- (2) Though substance abuse related ER visit rates were consistently lower than in Maryland, the substance abuse related ER visit rates and drug induced mortality rates in the County increased over time. NH-Whites and persons ages 18-34 had the highest rates.
- (3) Though suicide related hospitalization and ER visit rates were consistently lower than in Maryland, the ER visit rates in the County increased. Persons ages 18-34 and 5-17 had the highest suicide related hospitalization and ER visit rates respectively.

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**Injury**

- (1) Overall injury hospitalization and ER visit rates decreased in the County. County rates were consistently lower than in Maryland.
- (2) Motor vehicle related mortality and hospitalization rates decreased in the County, County rates were consistently lower than in Maryland; NH-Blacks and persons ages 18-34 had the highest ER visit rates.
- (3) Firearm related mortality and ER visit rates decreased in the County, County rates were consistently lower than in Maryland; those ages 18-34 had the highest hospitalization and ER visit rates.

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**Environmental Health**

- (1) The percentage of children with high blood lead level (5-9 ug/dL) in the County was much lower than in Maryland (0.8% and 1.5% respectively in 2016).
- (2) Though there was a decreasing trend of PM2.5 in the County, the particulate matter level in the County was similar to that in Maryland but consistently higher than the U.S.
- (3) Drinking water quality in the County meets all required EPA standards.



Montgomery County is the most populous county in Maryland with a population estimate of more than 1 million in 2014 from the U.S. Census. It would be the 10th most populous city in the U.S. if it were a city. Montgomery County is one of the most affluent counties in the country [1] and has the highest percentage (29.2%) of residents over 25 years of age who hold post-graduate degrees. In 2011, it was ranked by Forces as the 10th richest in the country, with a median household income of \$92,213 [2]. Montgomery County has a very diverse population and there is an increasing trend towards becoming more diverse over time. In 2014, there were 47.0% Non-Hispanic White, 18.6% Non-Hispanic Black, 15.0% Asian/Pacific Islander, and 18.3% Hispanic or Latino based on the estimate from U.S. Census. Of the County's population, 32.6% were born outside the U.S.

Montgomery County has had the highest overall health outcomes ranking in Maryland since 2014, based on the County Health Rankings by the Robert Wood Johnson Foundation [3]. However, ongoing efforts are needed to make improvements in the areas of access to health care, health inequities, and unhealthy behaviors. Healthy Montgomery is the County's community health improvement process that brings together County government agencies, elected officials, hospital systems, minority health initiatives/program, advocacy groups, academic institutions, community-based service providers, the health insurance community, and other stakeholders to achieve optimal health and well-being for County residents [4]. Six priority areas, including behavioral health, cancer, cardiovascular health, diabetes, maternal and infant health, and obesity were identified by Healthy Montgomery for priority-setting purposes. This report includes all the priority areas identified by Healthy Montgomery, in addition, it comprehensively covers all the major public health areas not addressed in Healthy Montgomery.

**This report is organized into three major sections:**

- (1) the summary of all mortality, hospitalization, and ER visits by year, sex, race/ethnicity, and age;
- (2) health area-specific statistics, and
- (3) the appendices. Here are the features of this report:
  - A section on prevention is included to illustrate the importance of prevention at different levels to reduce disease burden.
  - Comparison of disease rates by sex, race/ethnicity, age (where appropriate), and geographic areas are included to illustrate the disparities of risks associated with disease burden.



- Trends in disease burden over time are examined by health topic, to illustrate the effectiveness of prevention and intervention programs.
- Primary Care Service Areas (PCSA) are used to illustrate geographic variations in hospitalizations and ER visits due to selected health conditions. PCSAs are geographic areas that are self-sufficient markets of primary care, designed in a manner such that the majority of patients living in these areas use primary care services from within the area. This ensures that any geographic targeting of policies and resources reach the patients for whom they are meant.
- Comparisons of disease rates between sub-county areas (i.e. Census Tract, Zip Codes, PCSA, etc.) and the County overall through Geographic Information System (GIS) mapping are available to identify potential risks of diseases associated with different life styles and possible environmental/occupational exposures.
- Comparison of disease rates between the County, Maryland and U.S. are made where appropriate.
- Information from the 2015 Maryland Behavioral Risk Factor Surveillance System (BRFSS) and 2013-14 Youth Risk Behavior Survey (YRBS) is included to provide information on both risky and health-prompting behaviors, as well as prevalence estimates of certain health conditions.
- Information from the Healthy People 2020 is included to provide a benchmark for the progress made and areas for ongoing efforts.
- A section on "Frequently Asked Questions" is included to provide answers to widely received inquiries from the public.
- Technical notes are included in the appendices to provide information on methodological issues.
- Definitions and ICD-9/10 CM codes for mortality and hospitalization associated with each health condition are provided.
- Sources of additional information are included in the appendices.

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**Department of Health  
and Human Services**

The Department of Health and Human Services is responsible for public health and human services that help address the needs of our community's most vulnerable children, adults and seniors. DHHS has more than 130 programs and delivers services at more than 20 locations, with more locations throughout schools. DHHS's core services protect the community's health, protect the health and safety of at risk children and vulnerable adults and address basic human needs including food, shelter and clothing. The five main service areas of DHHS include Aging and Disability Services, Behavioral Health and Crisis Services, Children, Youth and Family Services, Public Health Services, and Special Needs Housing. Additionally, the Office of Community Affairs provides direct services through several programs. DHHS has more than 1,700 employees and provides services to more than 120,000 clients annually (1 in every 8 residents).

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**Office of Planning  
and Epidemiology**

DHHS Public Health Services entails Cancer Screening Programs, Communicable Diseases and Emergency Preparedness, Community Health Services, Health Care for the Uninsured, Planning and Epidemiology, Licensure and Regulatory Services, and School Health Services.

The Office of Planning and Epidemiology serves as the expert in planning and analytic epidemiology within DHHS and is responsible for community health needs assessment, program evaluations, disease surveillance and outbreak investigations, health statistics and data management, epidemiology and biostatistics, ongoing development and maintenance of a population data warehouse, and special research projects in collaboration with internal and external partners and academic institutions.



# Prevention



Many types of health conditions may be prevented, and considerable progress continue to be made to improve the quality of life and survival for people with these conditions. revention strategies are based on the natural history of the disease development and are categorized into three levels of intervention.

Primary prevention – is to limit the occurrence of health conditions by controlling exposure to risk factors or increasing an individual's resistance to them (e.g., through physical exercises). The first step is to identify the relevant exposures and to assess their impact on the risk of developing disease in the population. For example, consuming recommended fruits and vegetables and exercising may help reduce cholesterol and prevent cardiovascular diseases.

Maternal smoking during pregnancy may increase risks for preterm birth, low birth weights, and certain birth defects.

This report includes County-specific information from the 2015 Maryland Behavioral Risk Factor Surveillance System (BRFSS) survey and 2013-14 Youth Risk Behavior Survey (YRBS) and whenever possible and appropriate.

This icon indicates data from the Maryland Behavioral Risk Factor Surveillance System (BRFSS) survey in 2015, a survey of Maryland residents to assess risk behaviors and attitudes pertinent to health outcomes.



\* Some results of this survey are limited by the low response rate. Although the demographic profile of respondents correlated well with the sample's characteristics, the results may be considered representative of the respondents only.

**Secondary prevention** – refers to detection of diseases at an early stage when intervention is more effective than at the time of usual diagnosis and treatment. Early detection and intervention can reduce or eliminate the complications related to the condition, including death. Screening represents an important component of secondary prevention. Prenatal visits provide strategic opportunities to identify adverse birth outcomes early and employ appropriate interventions to reduce the consequences of health conditions.





# The Zip Code Ranking Project

An analysis of health factors and health outcomes by zip code in  
Montgomery County, Maryland

Melissa Marcia  
Raul Cruz-Cano, PhD  
Chunfu Liu, ScD



# County Health Rankings & Roadmaps

“The annual County Health Rankings measure vital health factors [...] revealing [a] snapshot of how health is influenced by where we live, learn, work and play. They [also] provide a starting point for change in communities.”

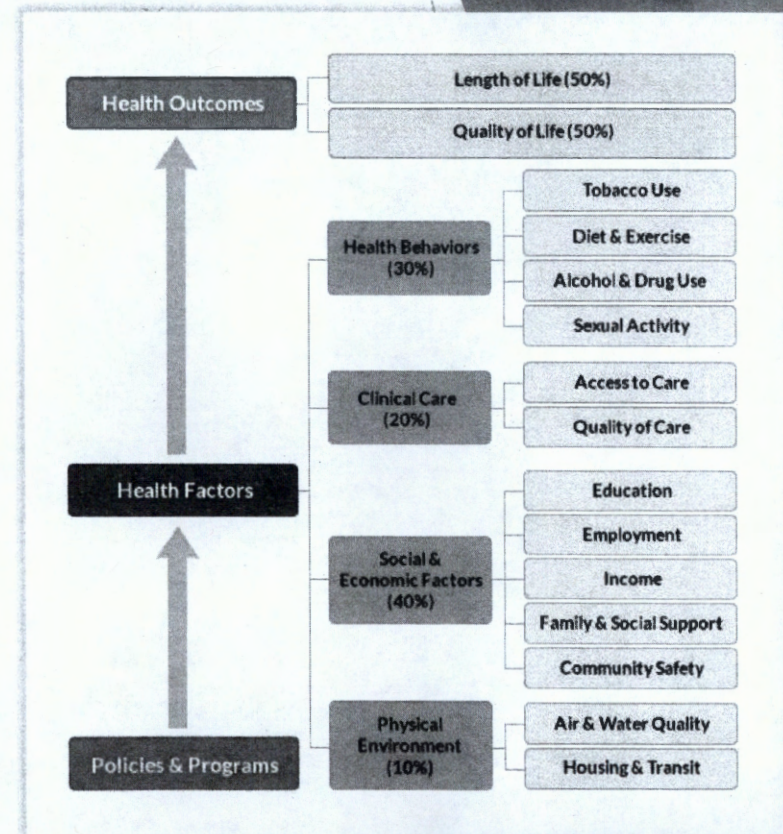
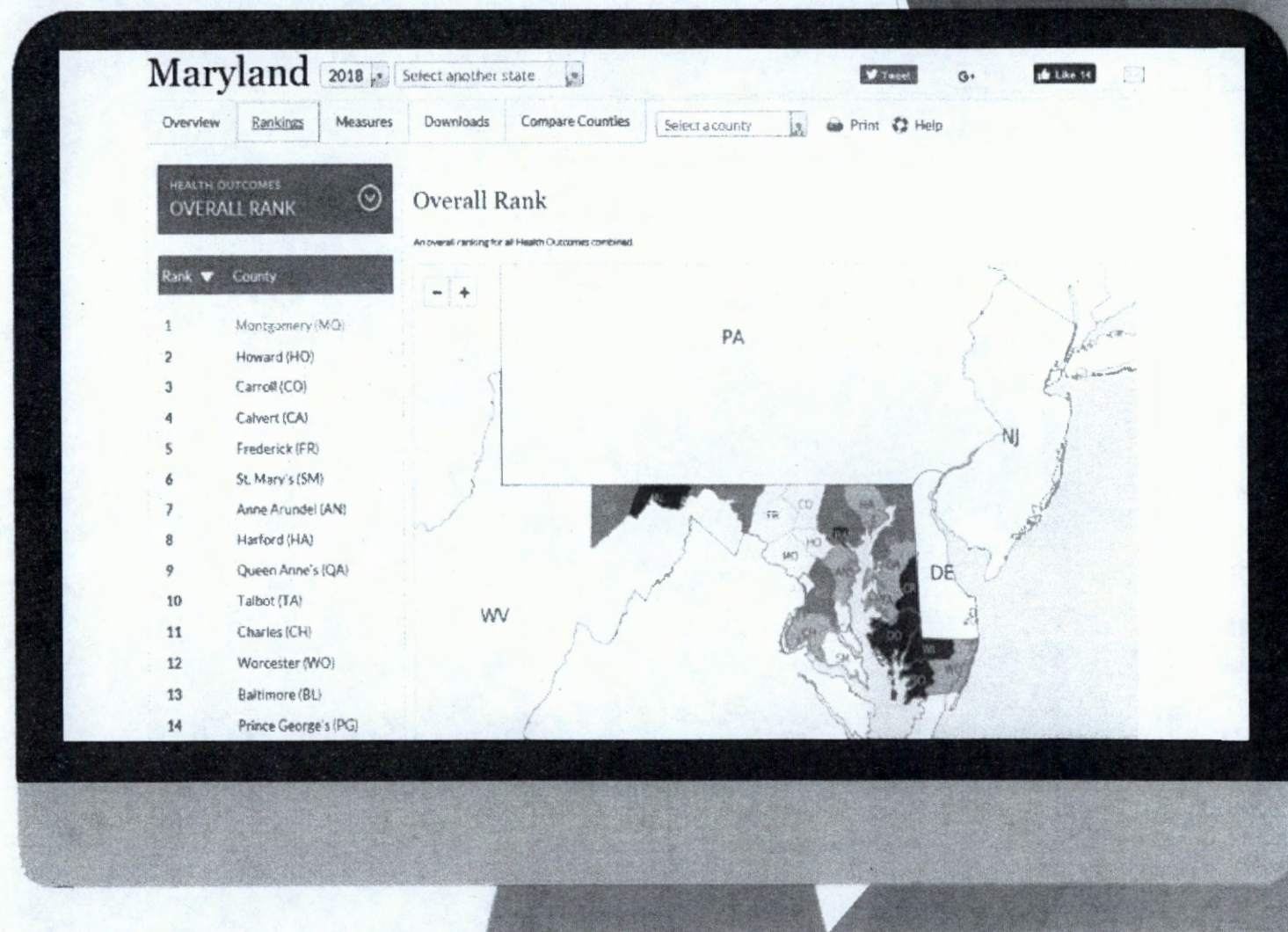


Figure 1. County Health Ranking framework/ algorithm for calculating a county's rank.



# Montgomery County's Standing





# Sub-County Variation

- ▶ Even within a county, there can be substantial variation in health factors and outcomes.
- ▶ Most surveillance systems don't collect zip-code level data.
- ▶ Statisticians created a new algorithm using alternative data sources to rank zip codes using a framework that was still true to the original County Health Rankings algorithm.

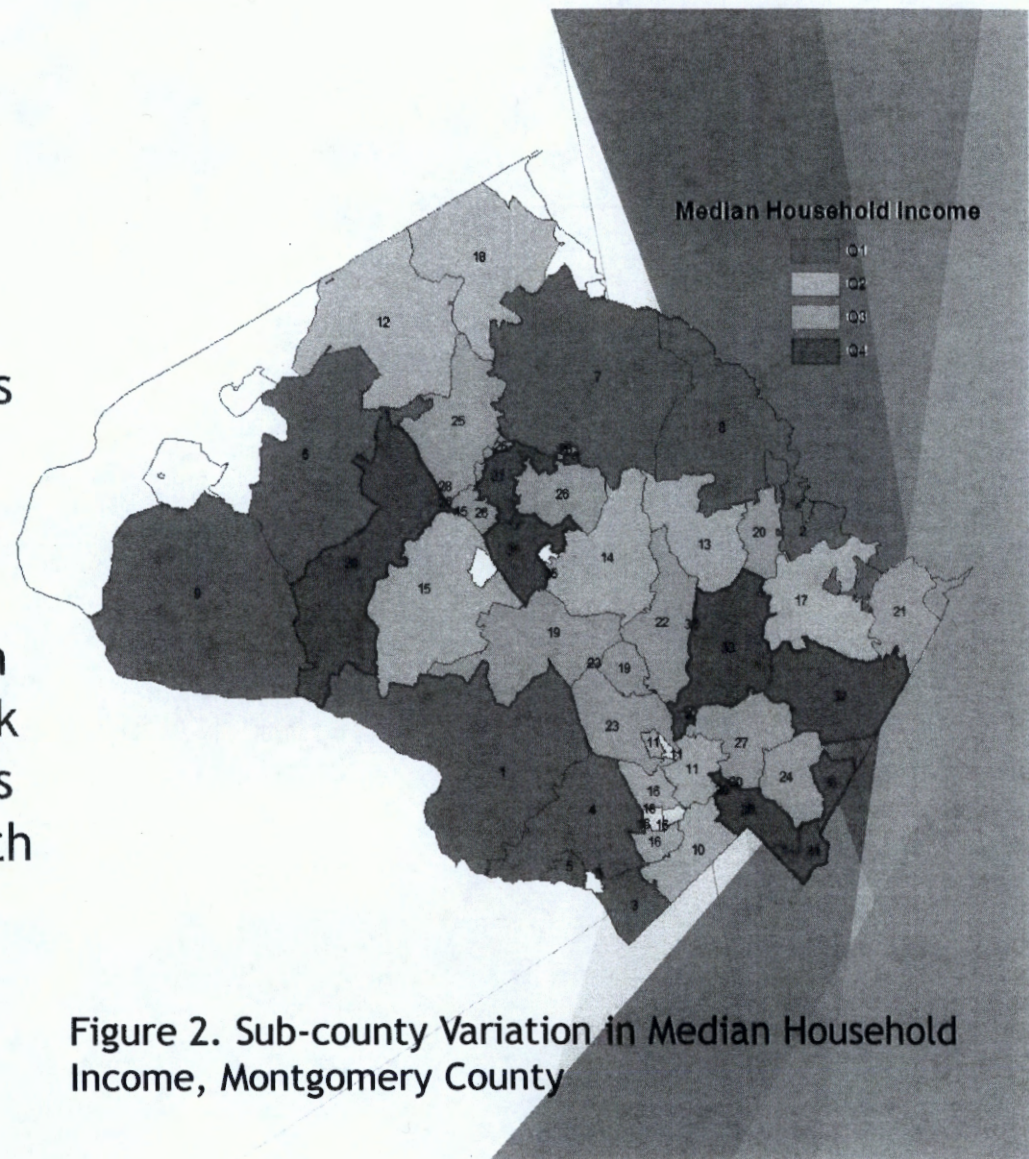


Figure 2. Sub-county Variation in Median Household Income, Montgomery County



## Measures

- Under 75 mortality rate
- Years of productive life lost

- Inpatient and ER hospitalization rate
- Mental health hospitalization rate
- Low birth weight

- Sexually transmitted infection rate
- Teen birth rate

- Percent of population employed in health care
- After-hours hospitalization rate
- Hospitalizations for preventable conditions

- Population with less than a HS education
- Percent unemployment
- Percent of children living in poverty
- Median household income

- Violent injury rate
- Injury death rate

## Sub-Domains

Length of life

Quality of life

Health behaviors

Clinical care

Socioeconomic factors

Physical environment

## Domains

Health Outcomes

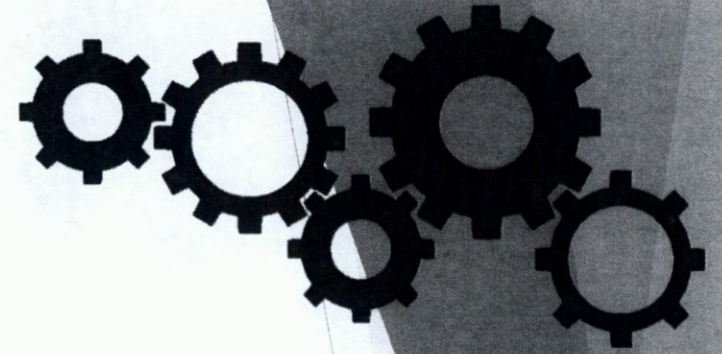
**RANK**

Health Factors



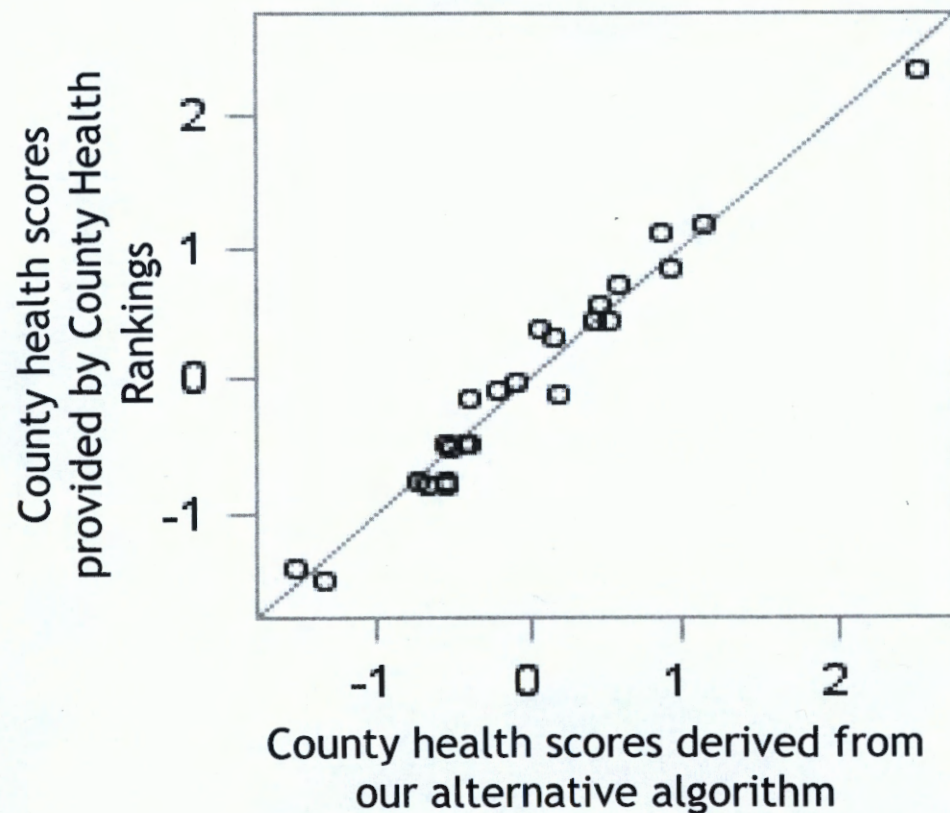
# Methods

- ▶ Collected data (2014-2016) from:
  - ▶ Birth records
  - ▶ Death records
  - ▶ PRISM
  - ▶ American Community Survey
  - ▶ In-patient and out-patient hospital records
- ▶ Used principle component analysis and multiple linear regression to derive alternative algorithm
- ▶ Compared results of alternative algorithm with actual County Health Rankings scores at the county level to validate model
- ▶ Applied alternative algorithm to Montgomery County zip codes





# Results — Model Accuracy



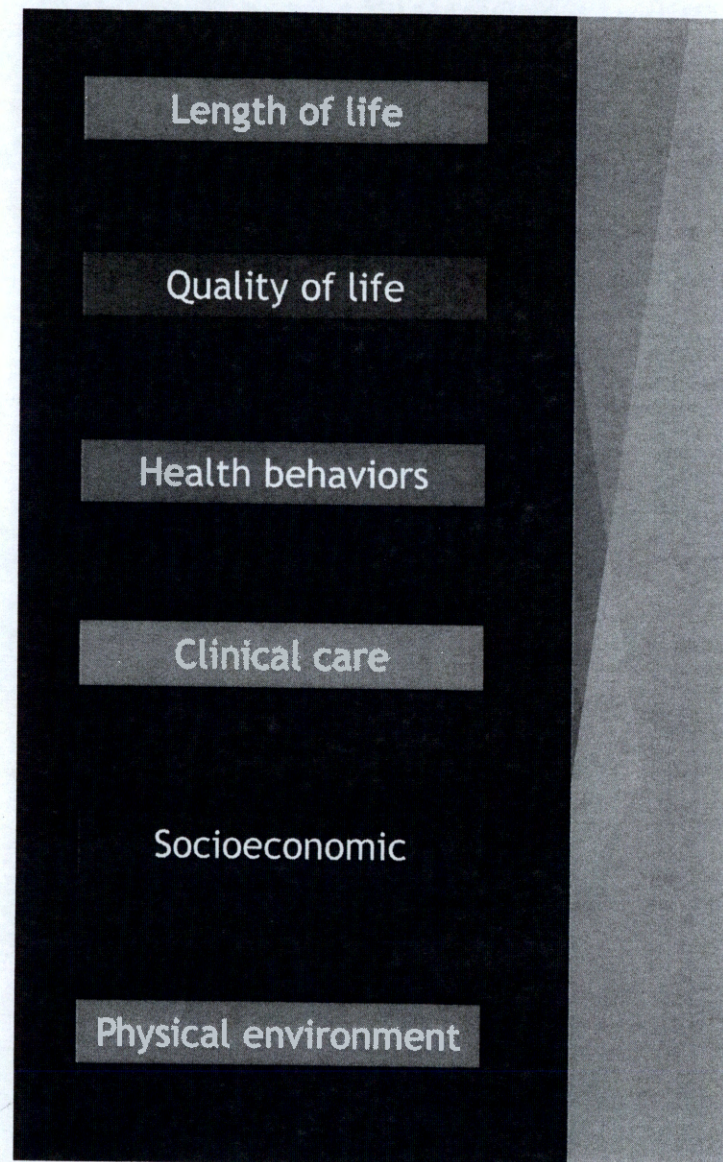
## Pearson Correlation

$R = 0.983$

**Conclusion:** Our algorithm creates health outcome scores that are highly correlated with the scores provided by county health rankings. Our model is a good fit and accurately predicts the true health scores.

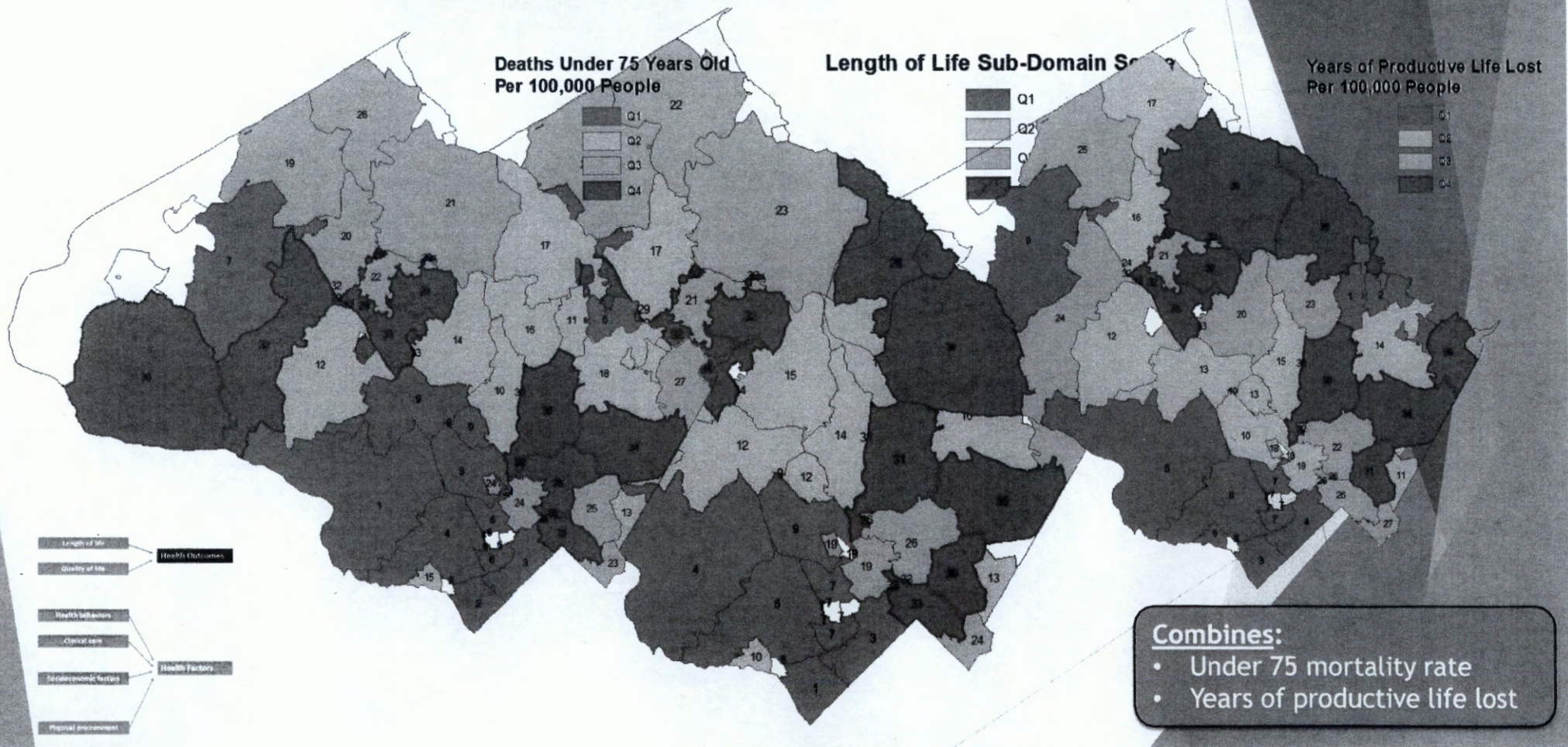


# Sub-Domain Scores



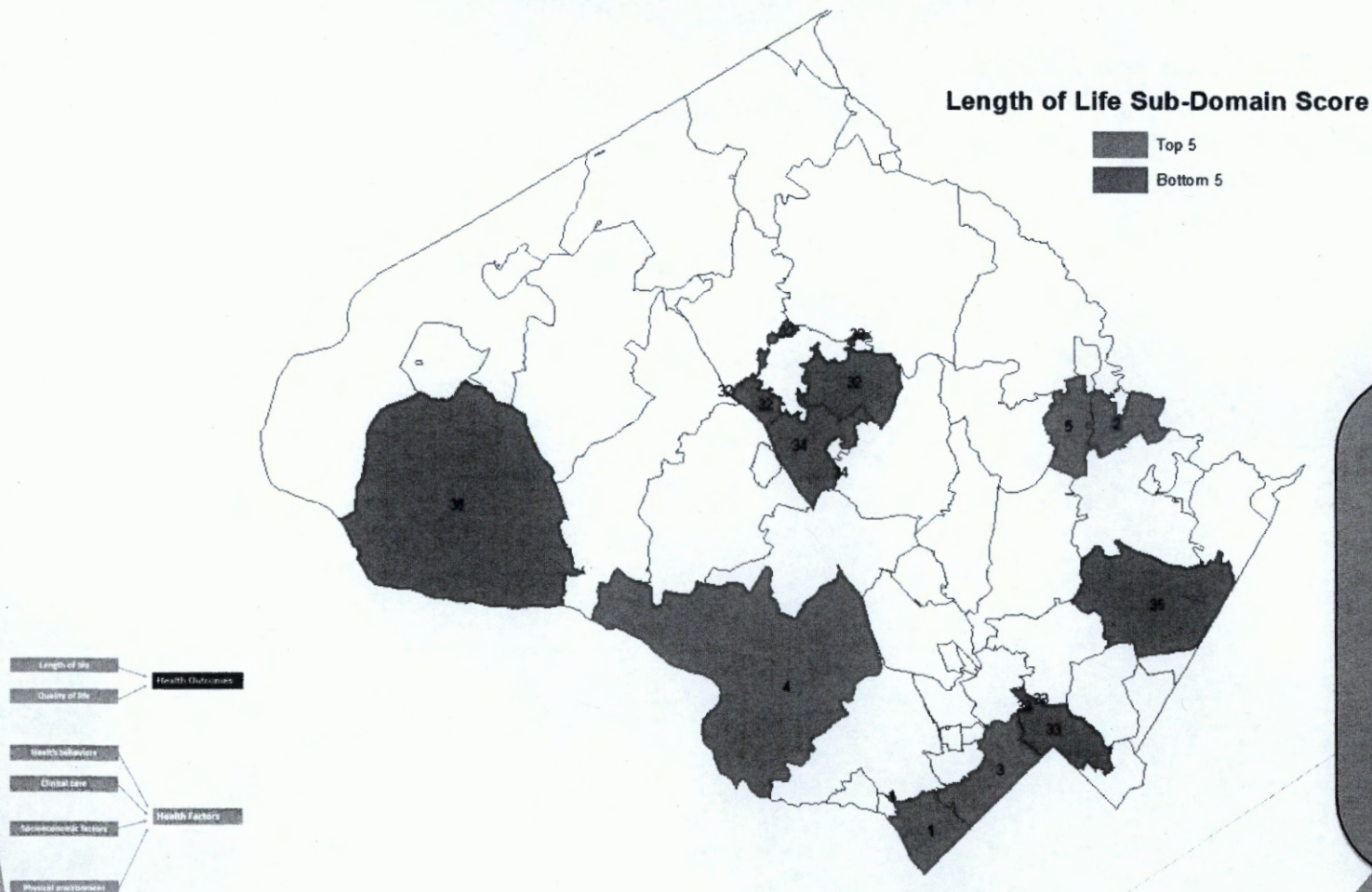


# Results — Length of Life





# Results — Length of Life



## Top 5 Zip Codes

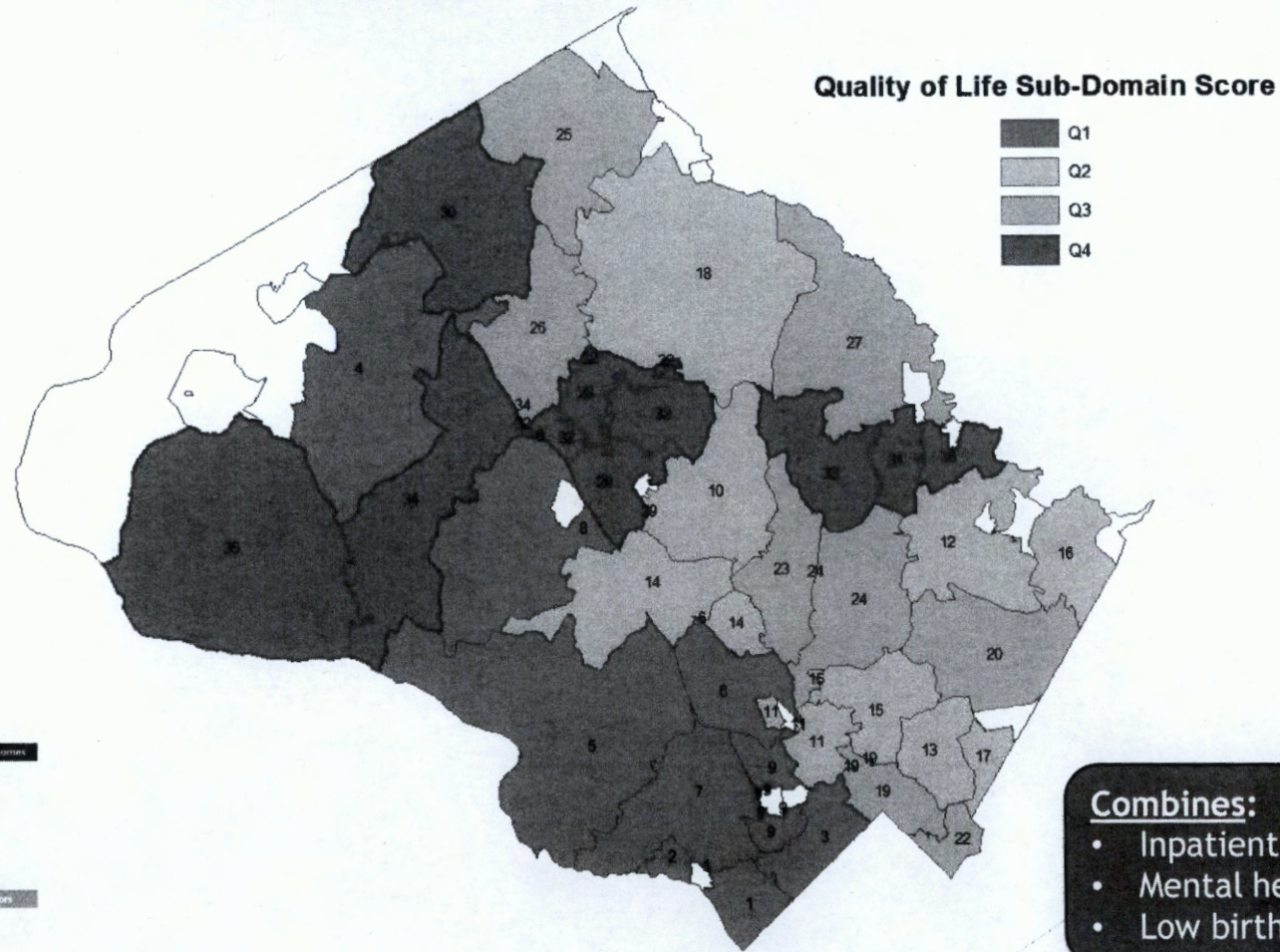
1. 20816 - Bethesda
2. 20861 - Ashton
3. 20815 - Chevy Chase
4. 20854 - Potomac
5. 20860 - Sandy Spring

## Bottom 5 Zip Codes

32. 20879 - Montgomery Village
33. 20910 - Silver Spring
34. 20877 - Gaithersburg
35. 20904 - Colesville
36. 20837 - Poolesville



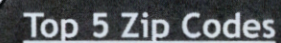
# Results — Quality of Life





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graph LR
    subgraph HO [Health Outcomes]
        L[Length of life]
        Q[Quality of life]
    end
    subgraph HF [Health Factors]
        HB[Health behaviors]
        CC[Clinical care]
        SE[Socioeconomic factors]
        PE[Physical environment]
    end
    L --> HO
    Q --> HO
    HB --> HF
    CC --> HF
    SE --> HF
    PE --> HF
  
```



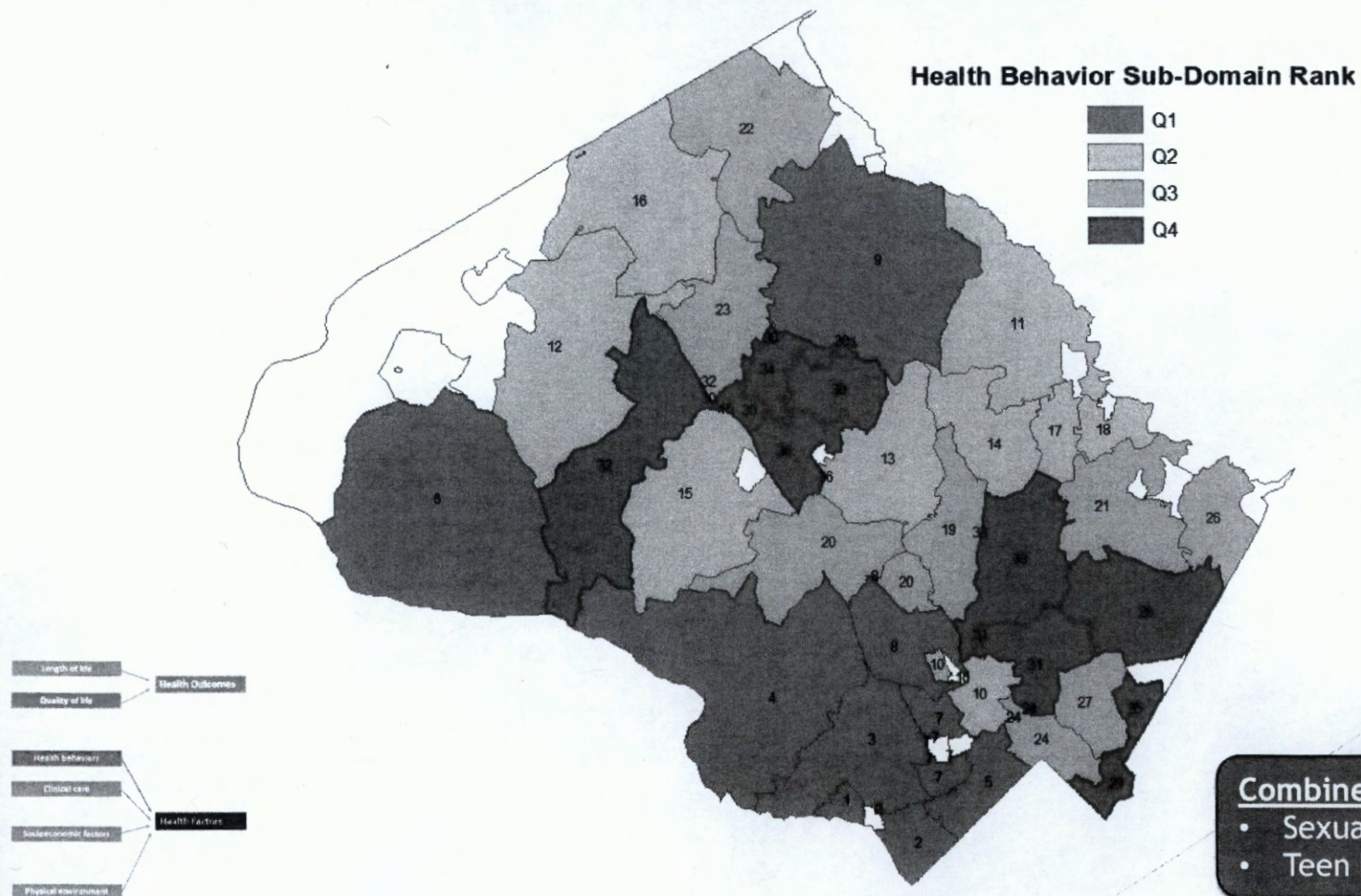
1. 20816 - Bethesda
2. 20818 - Cabin John
3. 20815 - Chevy Chase
4. 20841 - Boyds
5. 20854 - Potomac

### Bottom 5 Zip Codes

- 32. 20879 - Montgomery Village
- 33. 20832 - Olney
- 34. 20874 - Germantown
- 35. 20837 - Poolesville
- 36. 20861 - Ashton

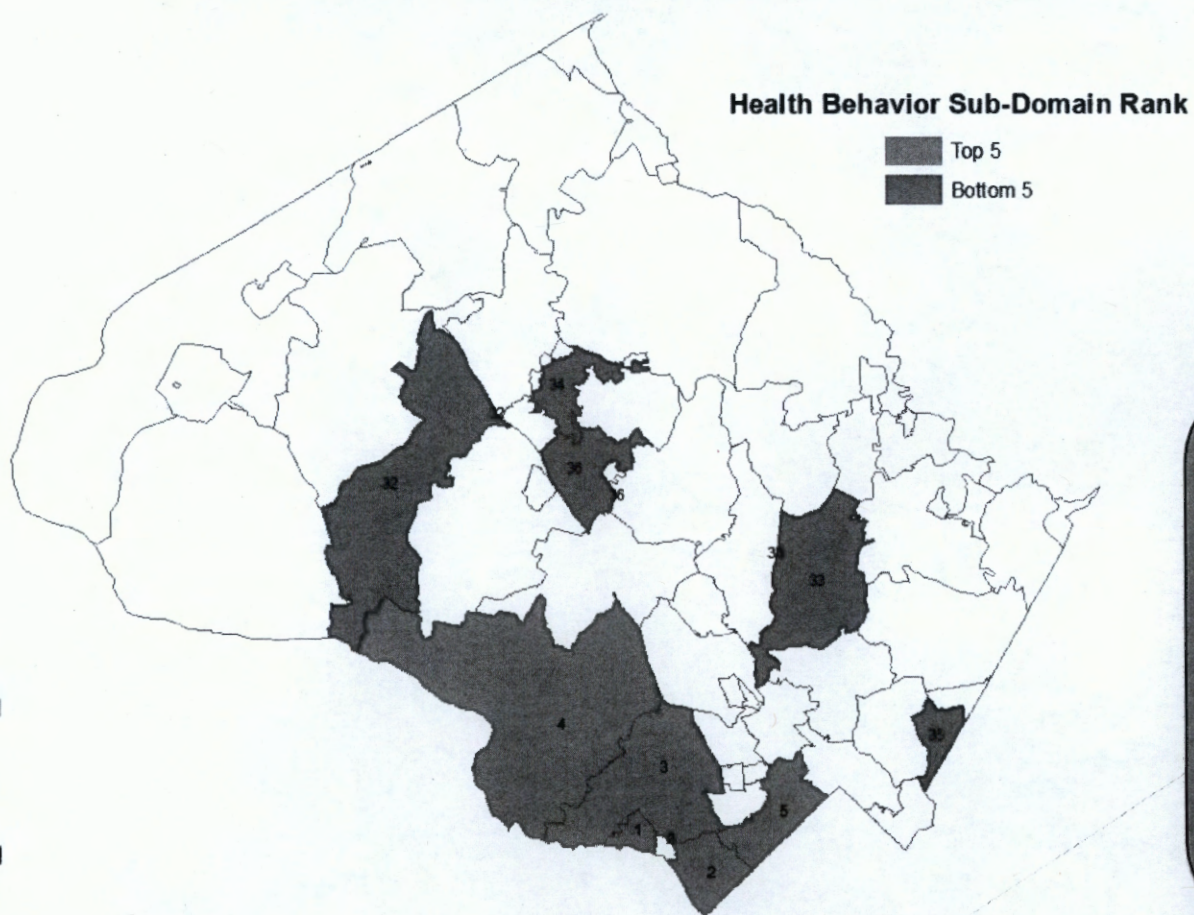
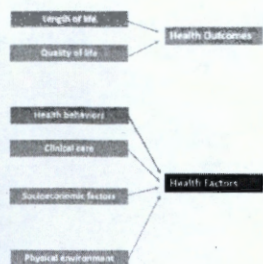


# Results — Health Behaviors





# Results — Health Behaviors



## Top 5 Zip Codes

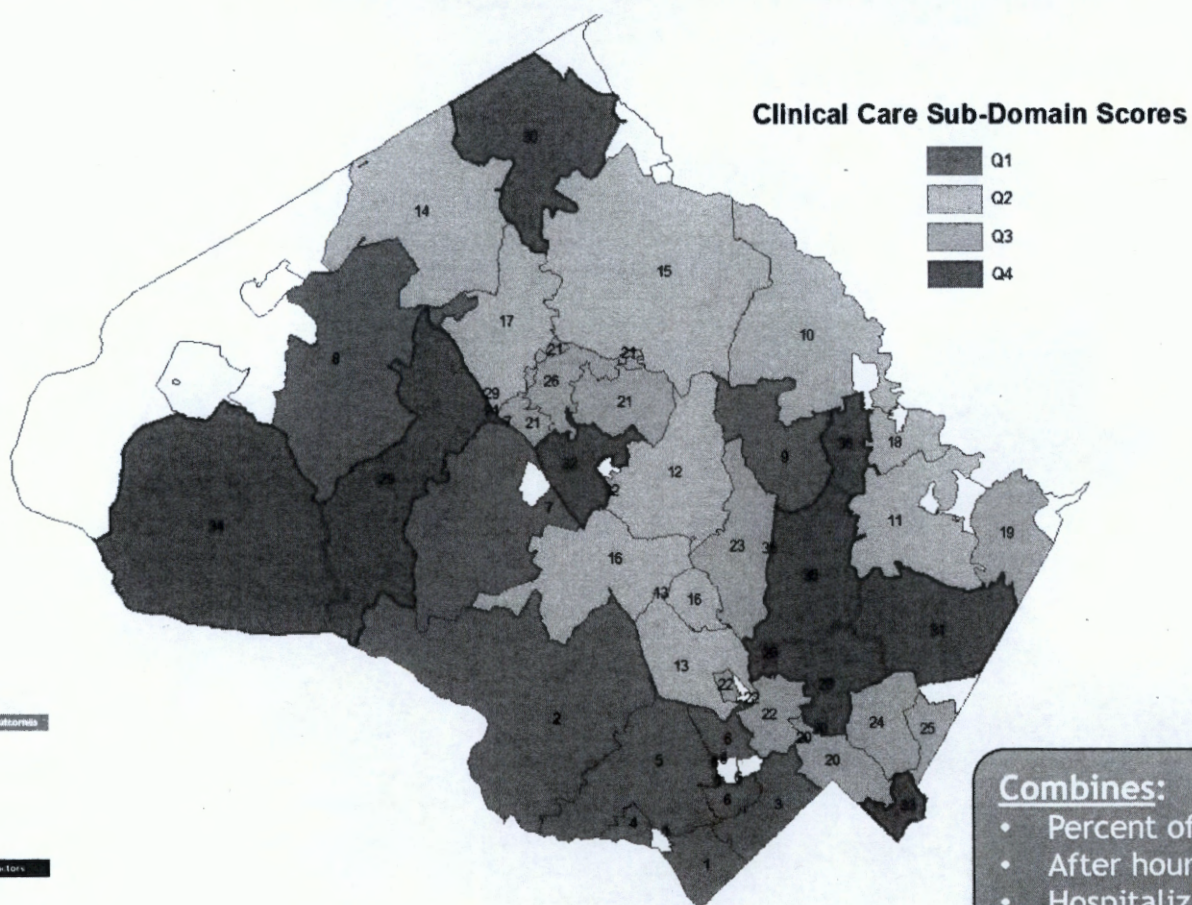
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2. 20816 - Bethesda
3. 20817 - West Bethesda
4. 20854 - Potomac
5. 20815 - Chevy Chase

## Bottom 5 Zip Codes

32. 20874 - Germantown
33. 20906 - Aspen Hill
34. 20886 - Montgomery Village
35. 20903 - Silver Spring
36. 20877 - Gaithersburg



# Results — Clinical Care Factors

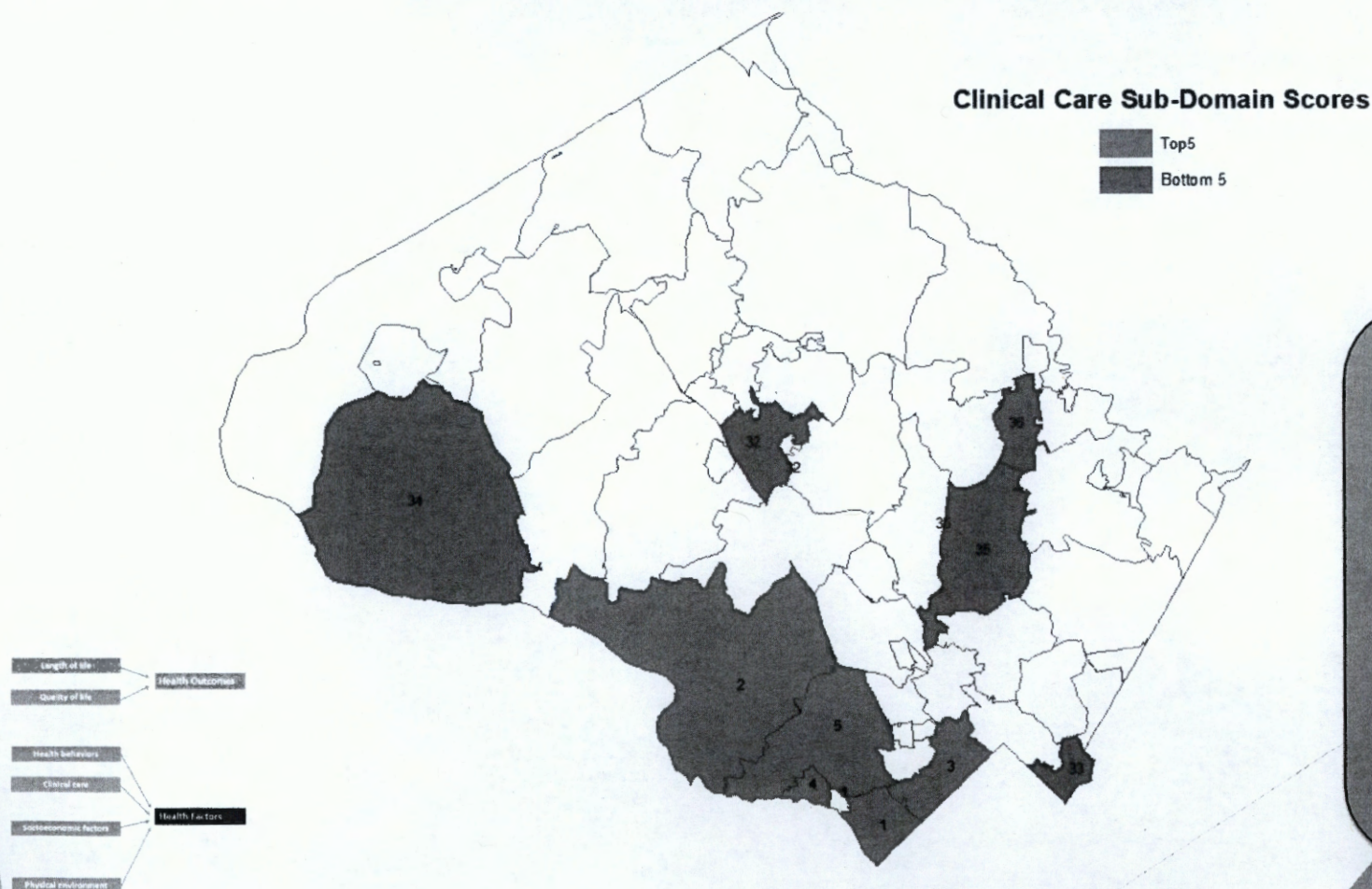


## Combines:

- Percent of population employed in healthcare
- After hours emergency department visits
- Hospitalizations for preventable conditions



# Results — Clinical Care Factors



## Top 5 Zip Codes

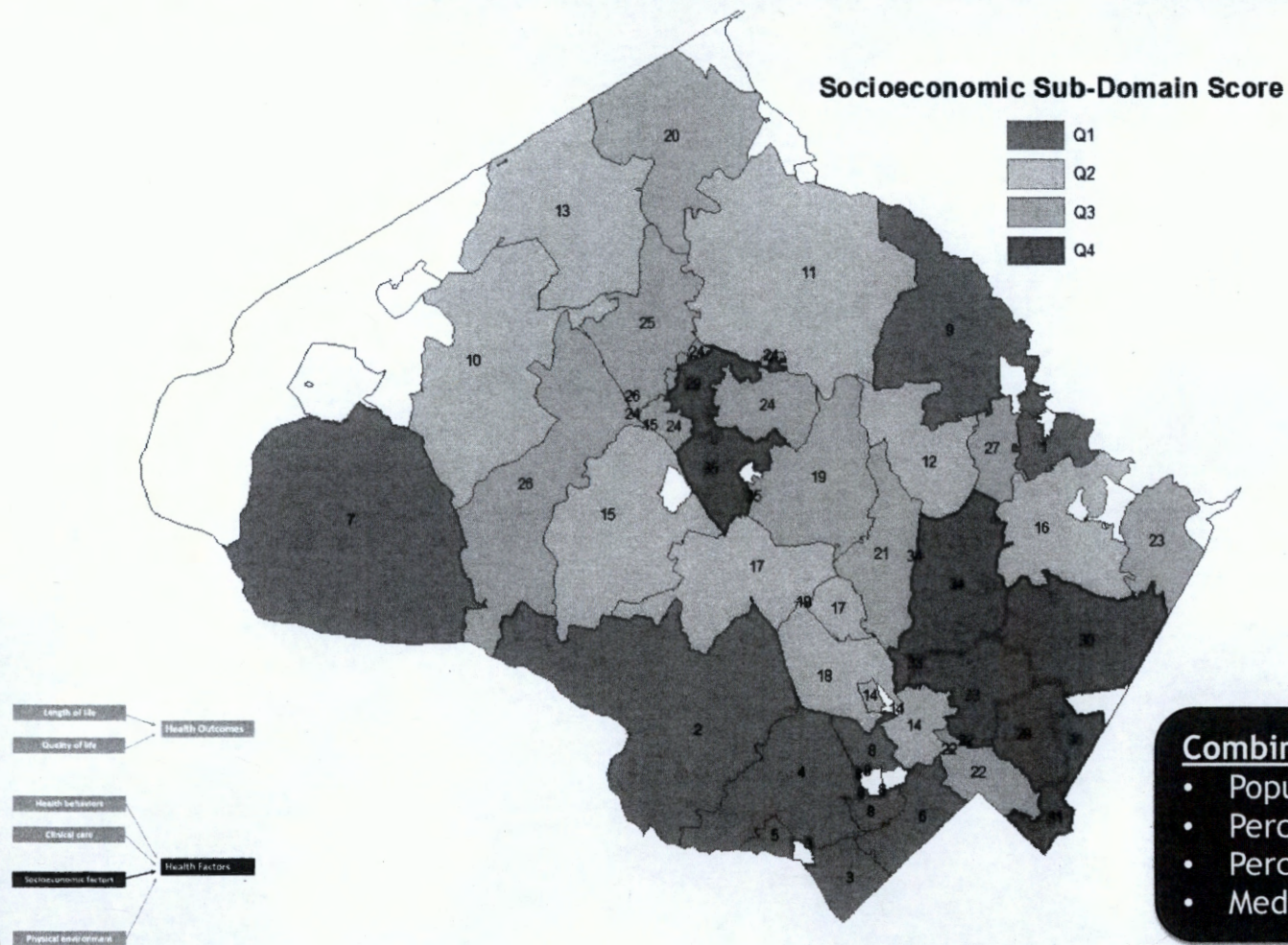
1. 20816 - Bethesda
2. 20854 - Potomac
3. 20815 - Chevy Chase
4. 20818 - Cabin John
5. 20817 - West Bethesda

## Bottom 5 Zip Codes

38. 20877 - Gaithersburg
39. 20912 - Takoma Park
40. 20837 - Poolesville
41. 20906 - Aspen Hill
42. 20860 - Sandy Spring



# Results — Socioeconomic Factors



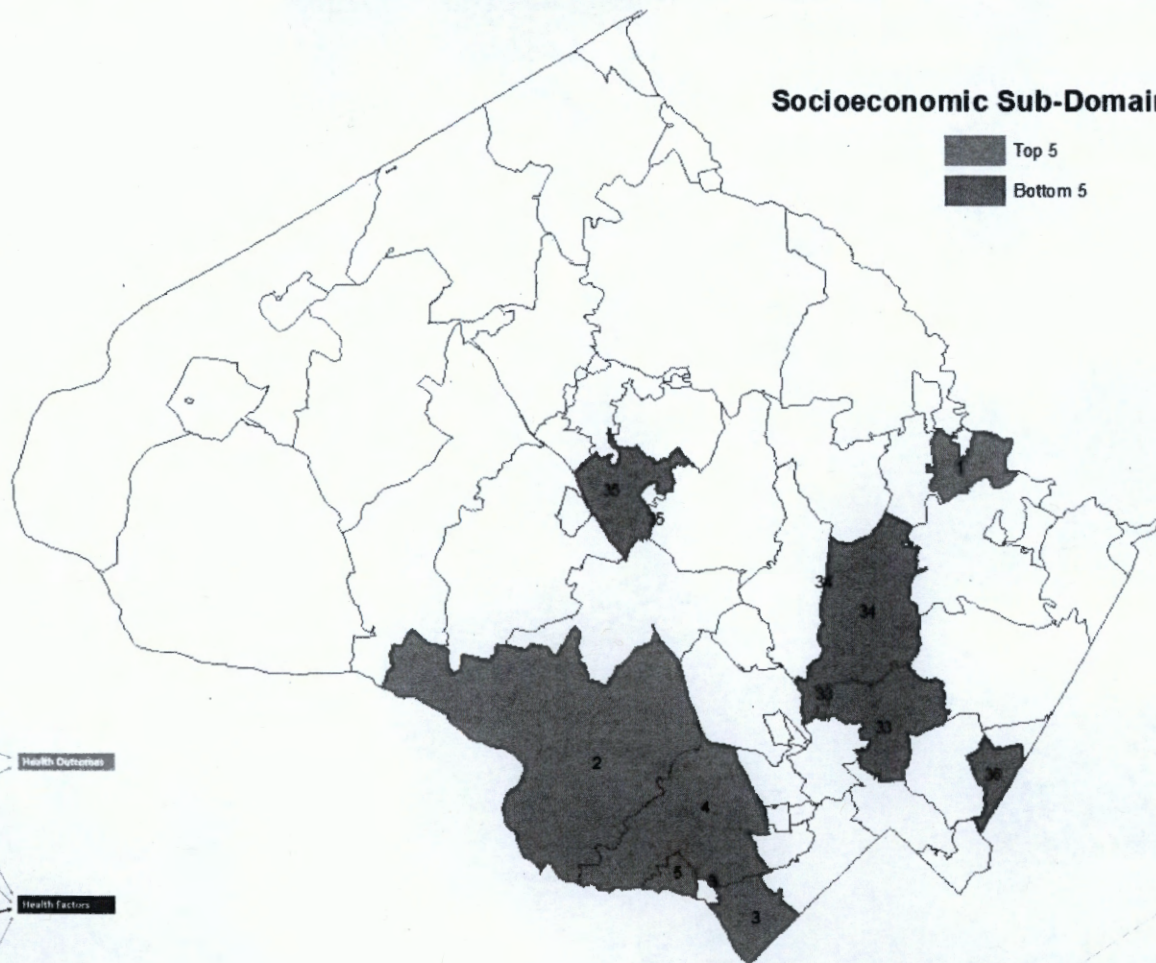
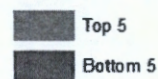
## Combines:

- Population with less than a HS education
- Percent unemployment
- Percent of children living in poverty
- Median household income



# Results — Socioeconomic Factors

Socioeconomic Sub-Domain Score

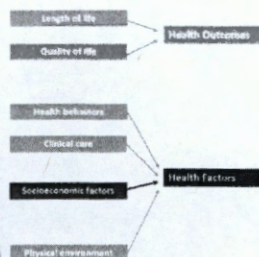


## Top 5 Zip Codes

1. 20861 - Ashton
2. 20854 - Potomac
3. 20816 - Bethesda
4. 20817 - West Bethesda
5. 20818 - Cabin John

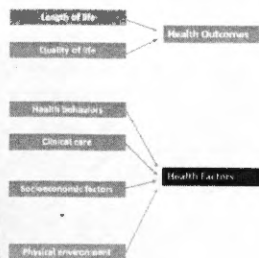
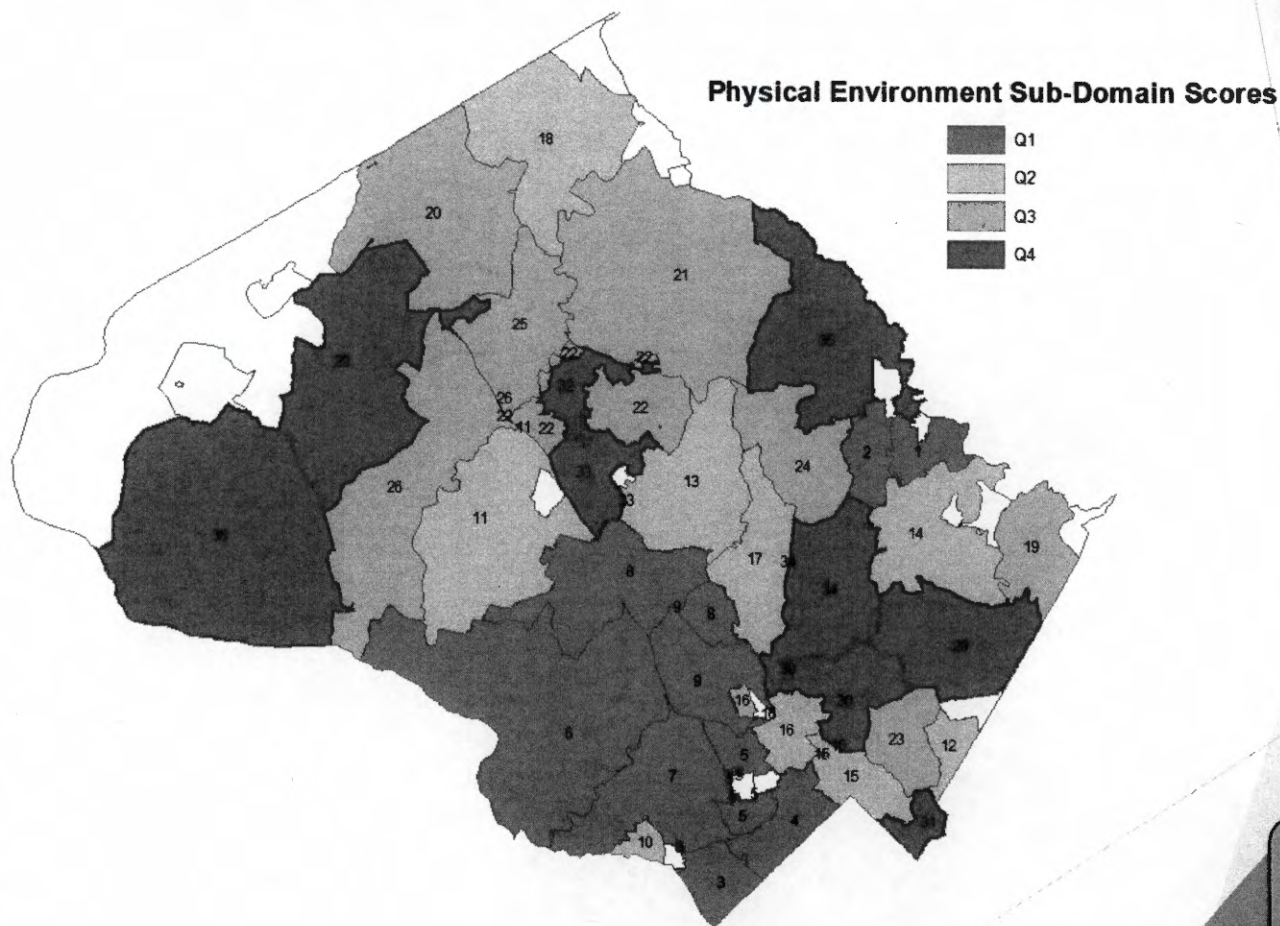
## Bottom 5 Zip Codes

32. 20851 - Rockville/Twinbrook
33. 20902 - Wheaton
34. 20906 - Aspen Hill
35. 20877 - Gaithersburg
36. 20903 - Silver Spring





# Results — Physical Environment

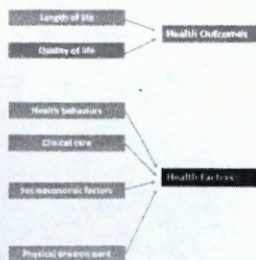
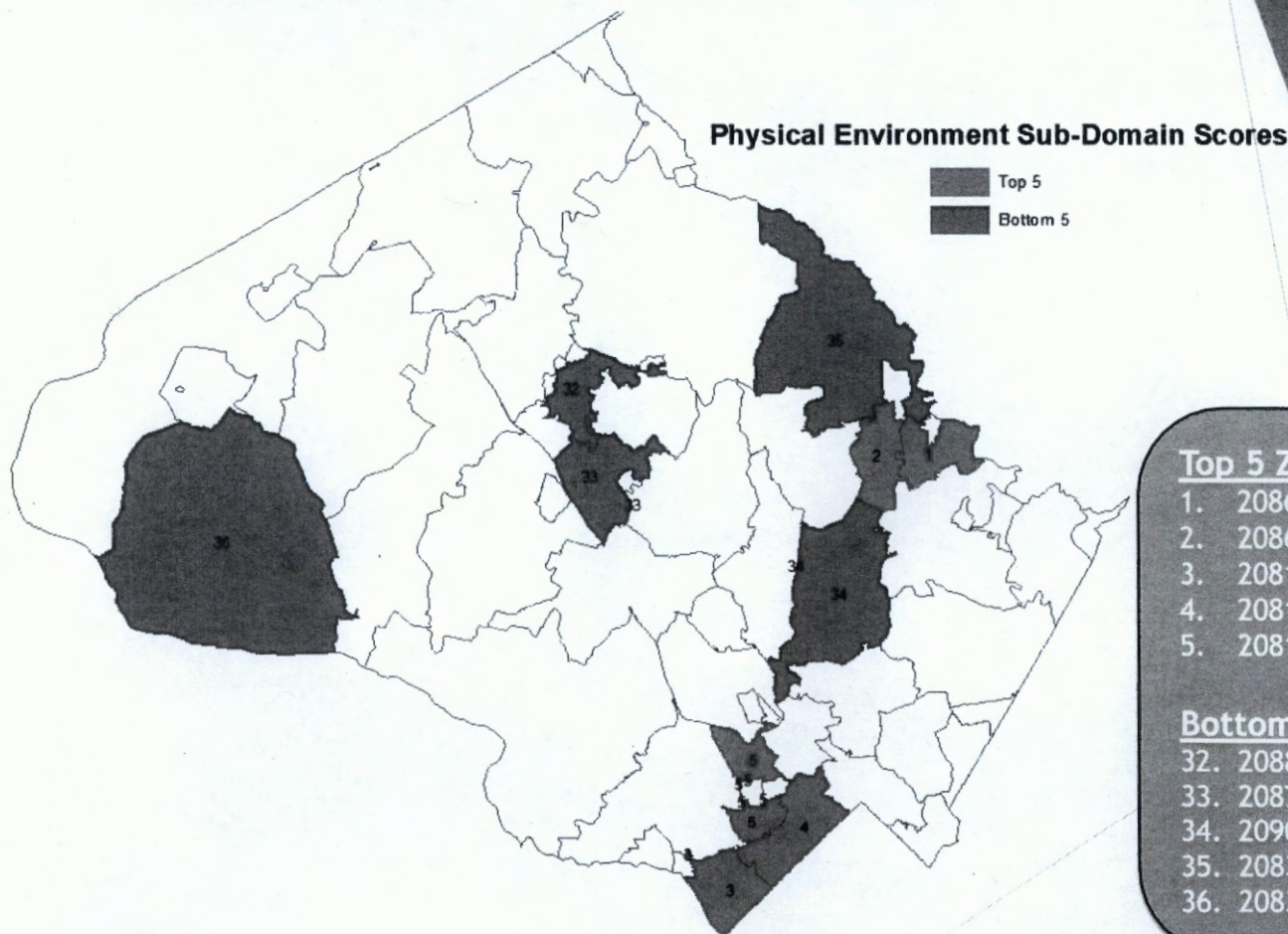


## Combines:

- Violent injury rate
- Injury death rate



# Results — Physical Environment





# Domain Scores and Overall Rank

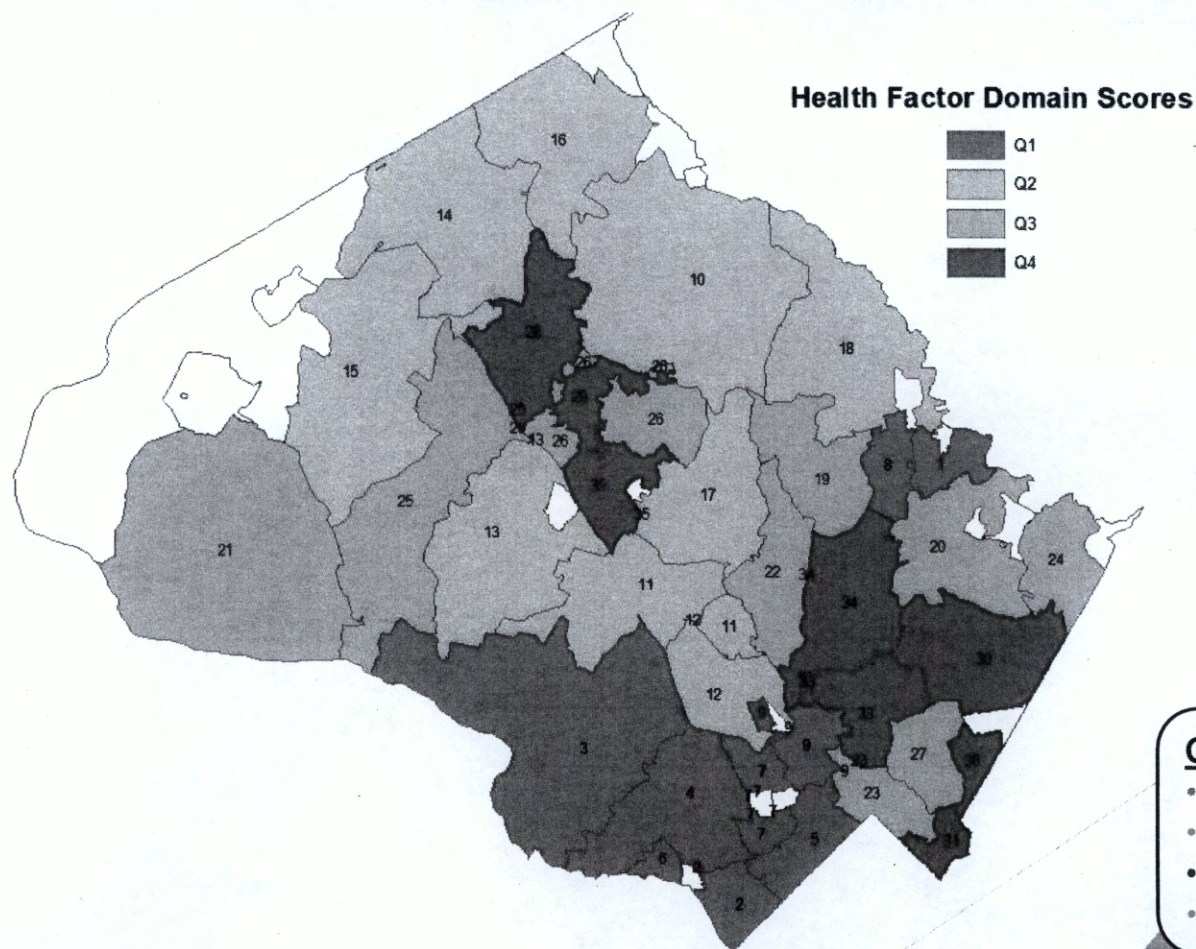


# Results — Health Factor Domain Scores





# Results — Health Factor Domain Scores

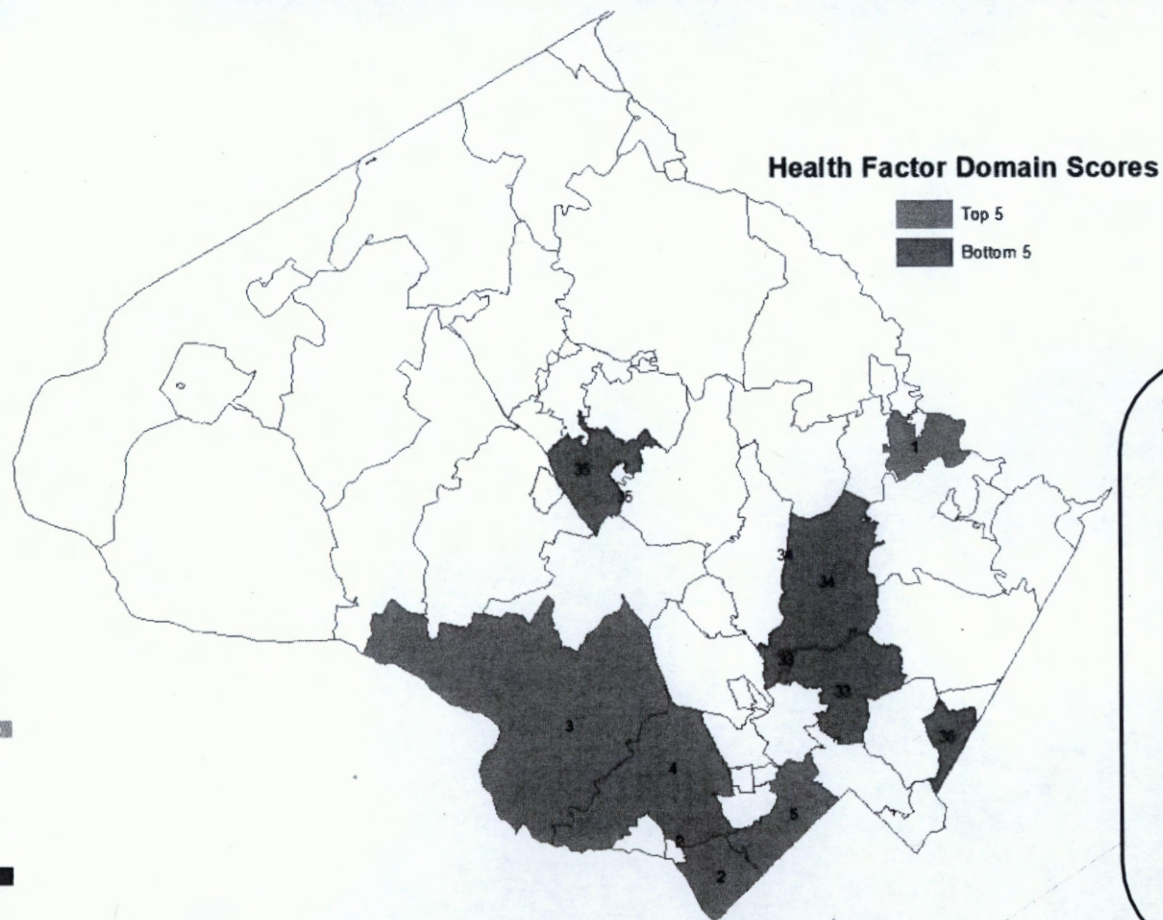


## Combines 4 sub-domains:

- Health Behaviors
- Clinical Care
- Socioeconomic Factors
- Physical Environment



# Results — Health Factor Domain Scores

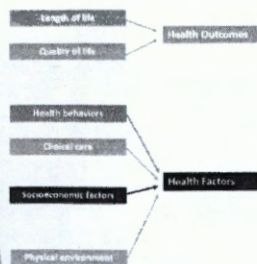


## Top 5 Zip Codes

1. 20861 - Ashton
2. 20816 - Bethesda
3. 20854 - Potomac
4. 20817 - West Bethesda
5. 20815 - Chevy Chase

## Bottom 5 Zip Codes

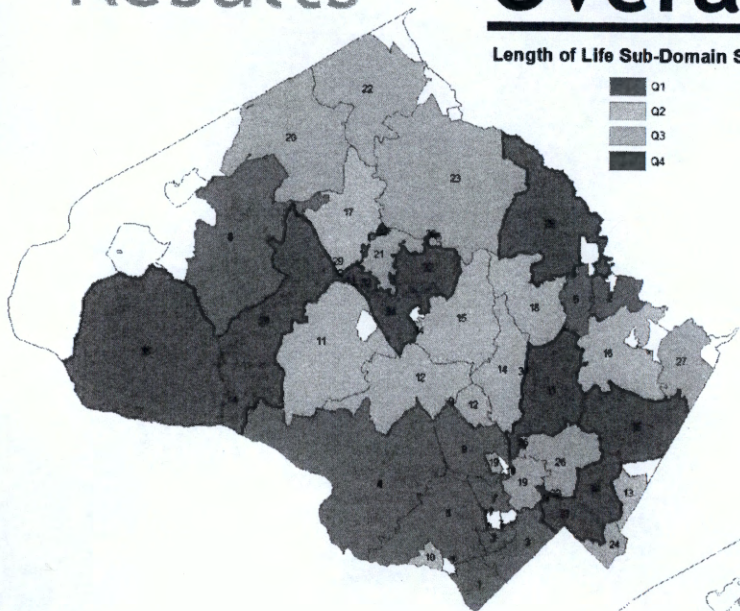
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33. 20902 - Wheaton
34. 20906 - Aspen Hill
35. 20877 - Gaithersburg
36. 20903 - Silver Spring



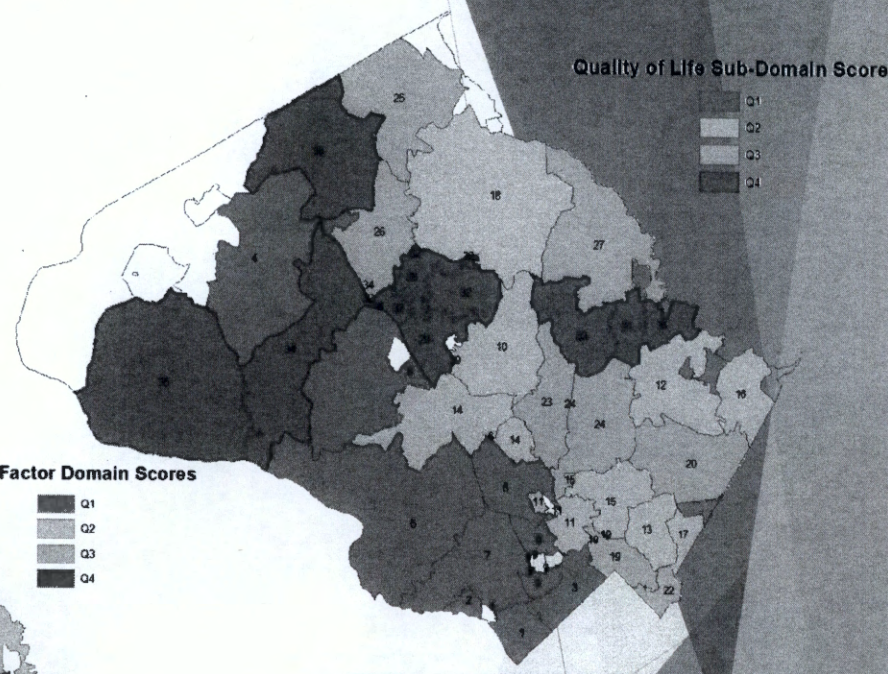
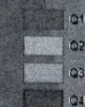


# Results — Overall Rank

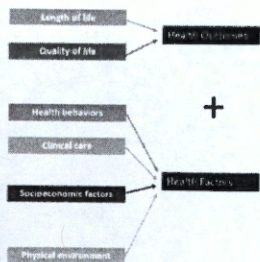
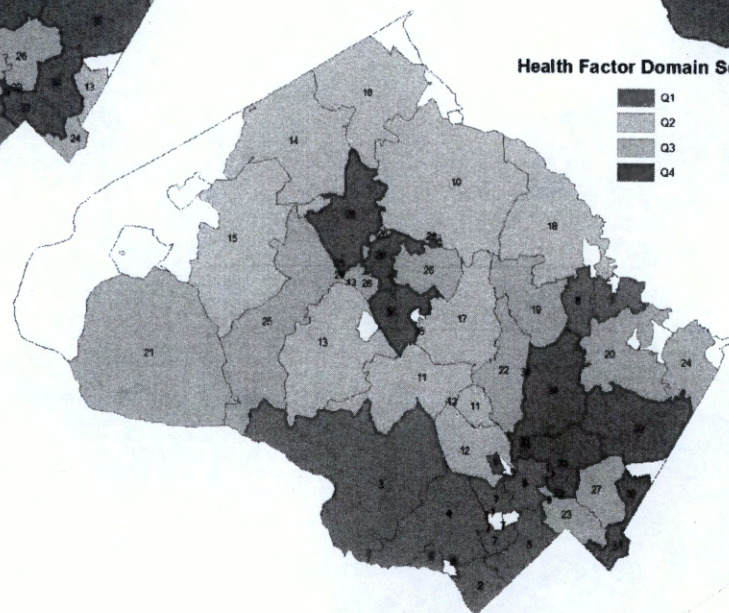
Length of Life Sub-Domain Score



Quality of Life Sub-Domain Score



Health Factor Domain Scores

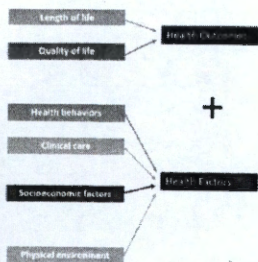
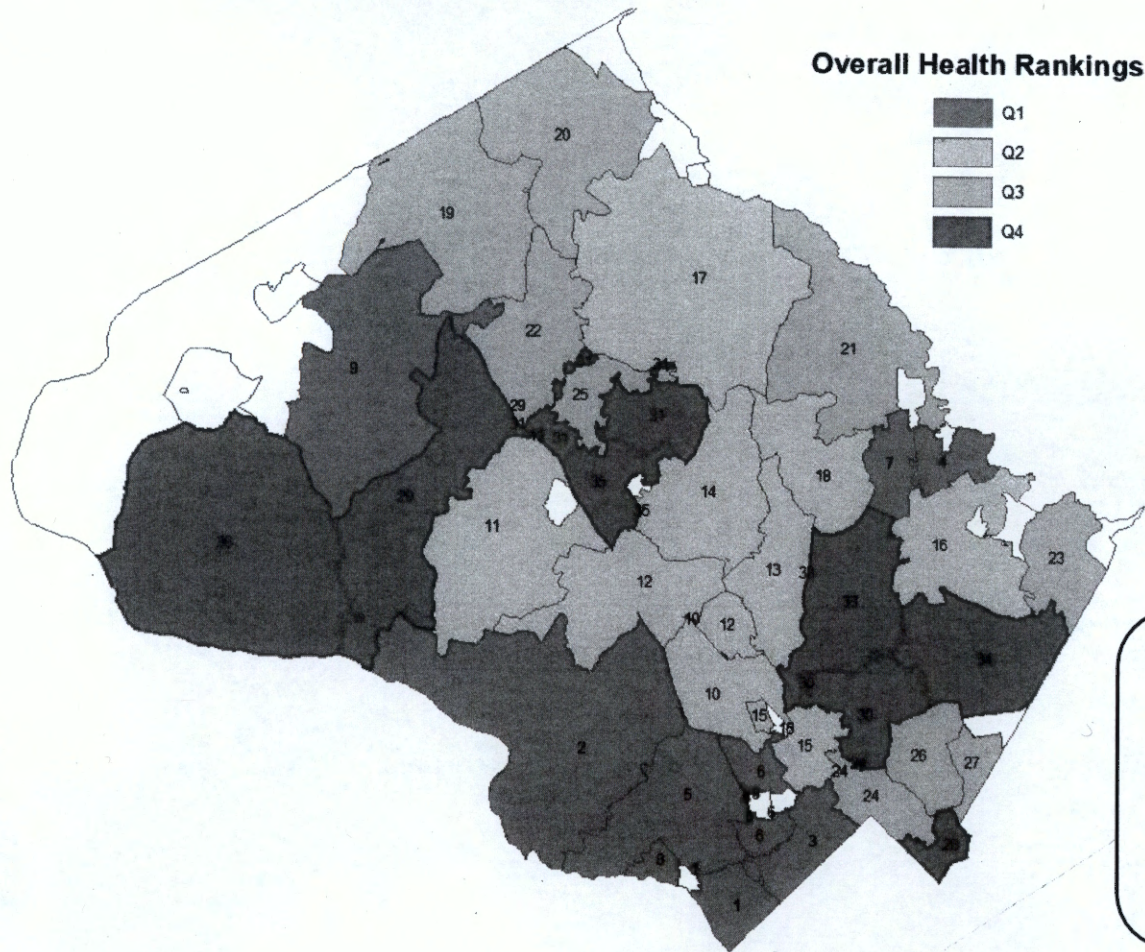


## Considers all 6 sub-domains:

- Length of Life
- Quality of Life
- Health Behaviors
- Clinical Care
- Socioeconomic Factors
- Physical Environment



# Results — Overall Rank

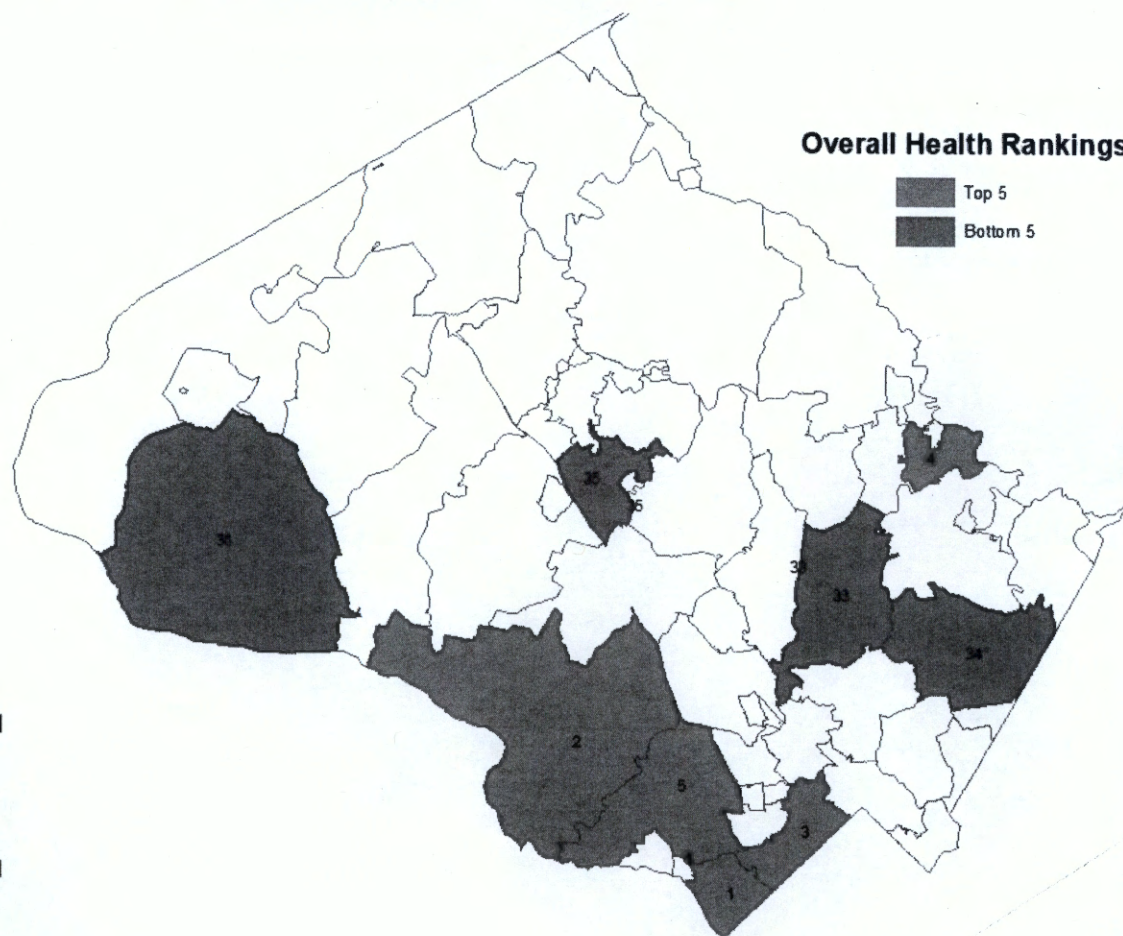
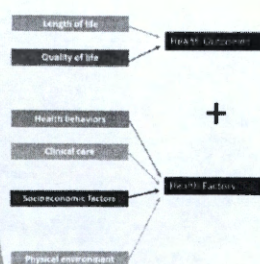


## Considers all 6 sub-domains:

- Length of Life
- Quality of Life
- Health Behaviors
- Clinical Care
- Socioeconomic Factors
- Physical Environment



# Results — Overall Rank



## Top 5 Zip Codes

1. 20816 - Bethesda
2. 20854 - Potomac
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5. 20817 - West Bethesda

## Bottom 5 Zip Codes

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33. 20906 - Aspen Hill
34. 20904 - Colesville
35. 20877 - Gaithersburg
36. 20837 - Poolesville



# Study Strengths

- ▶ Follows the validated methodology provided by Nagasako *et al.*\*
- ▶ Provides multi-level analysis.
- ▶ Secondary data analysis did not require additional data collection.
- ▶ Analysis could be expanded to look at zip codes across the state of Maryland.
- ▶ Looks at health holistically and considers how non-medical factors affect health.

\* Nagasako E, *et al.* Measuring Subcounty Differences in Population Health Using Hospital and Census-Derived Data Sets: The Missouri ZIP Health Rankings Project. *J Public Health Manag Pract.* 2018 Jul/Aug;24(4):340-349



# Study Limitations

- ▶ Limited measure selection and data availability
- ▶ High mobility between zip codes
- ▶ Some domains, particularly quality of life, clinical care, and health behaviors, are not significant predictors of rank



# Conclusion and Next Steps

- ▶ Results are consistent with our knowledge of Montgomery County's state of health.
- ▶ Socioeconomic and physical environment factors were the strongest contributors to the health factor domain scores.
- ▶ The health factor domain score and length of life subdomain scores were the strongest contributors to the overall rank.
- ▶ This analysis can inform targeted resource allocation to improve health in 'hot spots' around the county.



# So how does your zip code rank?

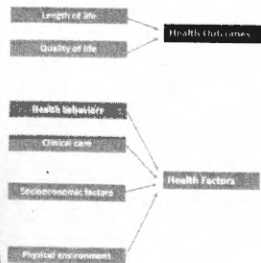
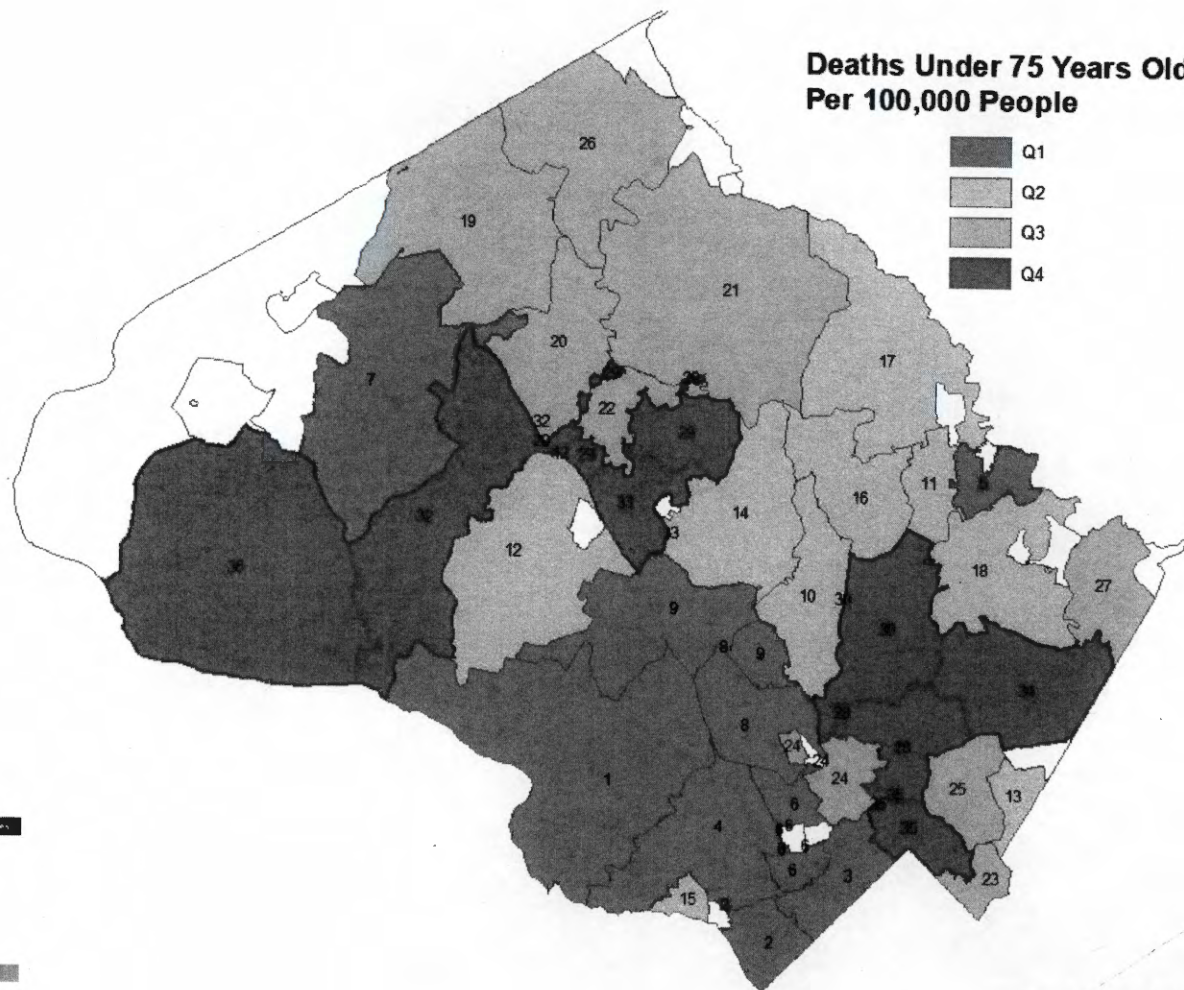
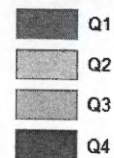
- |                                 |                                      |                                      |
|---------------------------------|--------------------------------------|--------------------------------------|
| 1. 20816 - Bethesda             | 13. 20853 - Rockville                | 25. 20886 - Montgomery Village       |
| 2. 20854 - Potomac              | 14. 20855 - Derwood                  | 26. 20901 - Silver Spring            |
| 3. 20815 - Bethesda/Chevy Chase | 15. 20895 - Kensington               | 27. 20903 - Silver Spring            |
| 4. 20861 - Ashton               | 16. 20905 - Colesville/Silver Spring | 28. 20912 - Takoma Park              |
| 5. 20817 - West Bethesda        | 17. 20882 - Laytonsville             | 29. 20874 - Germantown               |
| 6. 20814 - Bethesda             | 18. 20832 - Olney                    | 30. 20902 - Wheaton                  |
| 7. 20860 - Sandy Spring         | 19. 20871 - Clarksburg               | 31. 20879 - Gaithersburg             |
| 8. 20818 - Cabin John           | 20. 20872 - Damascus                 | 32. 20851 - Rockville/Twinbrook      |
| 9. 20841 - Boyds                | 21. 20833 - Brookeville              | 33. 20906 - Aspen Hill               |
| 10. 20852 - North Bethesda      | 22. 20876 - Germantown/Clarksburg    | 34. 20904 - Colesville/Silver Spring |
| 11. 20878 - Darnestown          | 23. 20866 - Burtonsville             | 35. 20877 - Gaithersburg (Old Town)  |
| 12. 20850 - Rockville           | 24. 20910 - Silver Spring (Downtown) | 36. 20837 - Poolesville              |



# INDIVIDUAL MEASURES FOLLOW



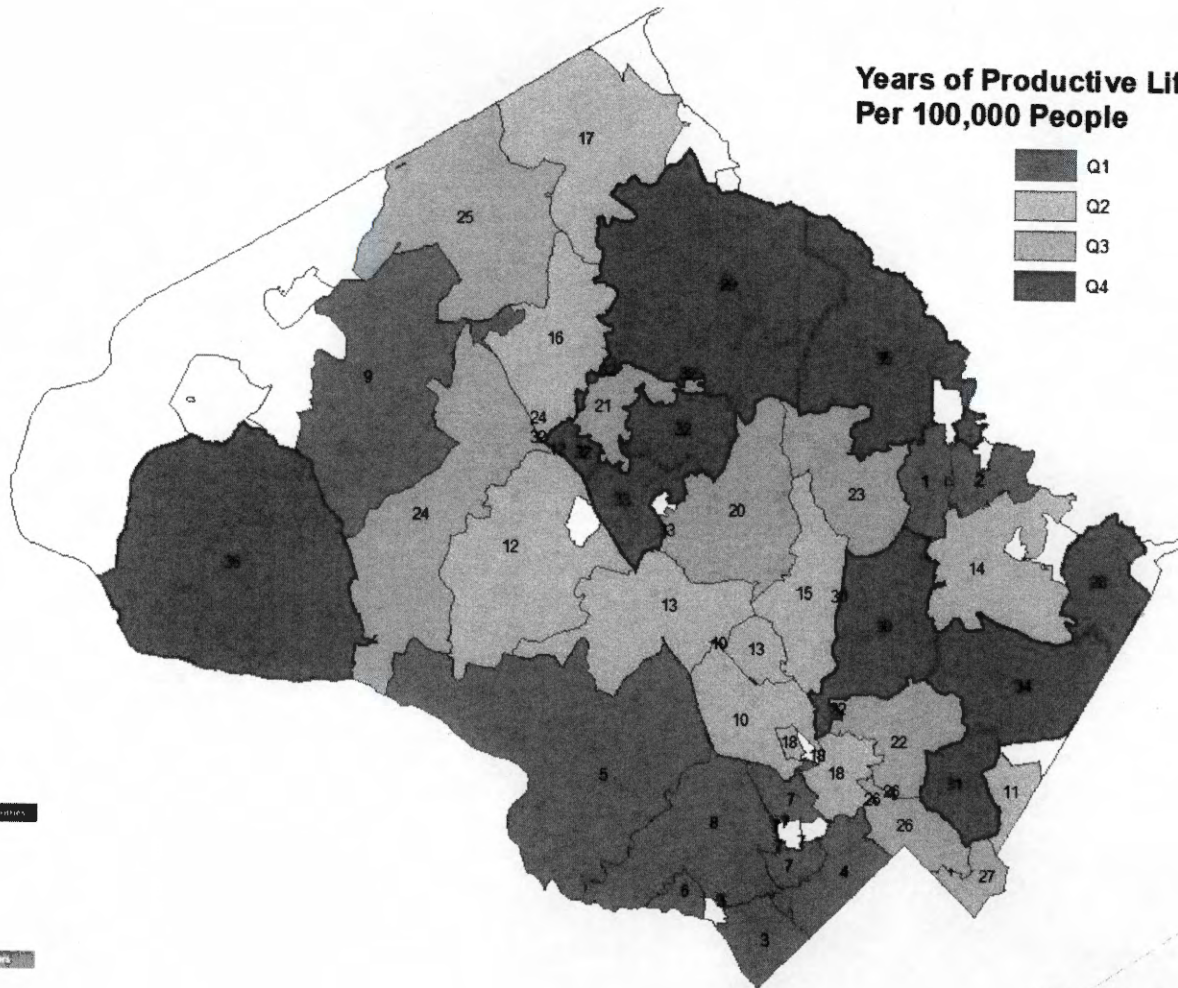
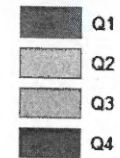
# Deaths Under 75 Years Old Per 100,000 People



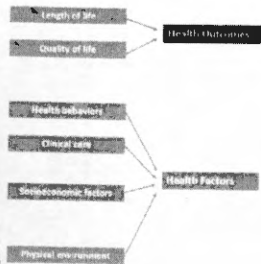
Range: 104 – 290 deaths / 100,000 people  
Montgomery County: 184 deaths / 100,000 people



# Years of Productive Life Lost Per 100,000 People

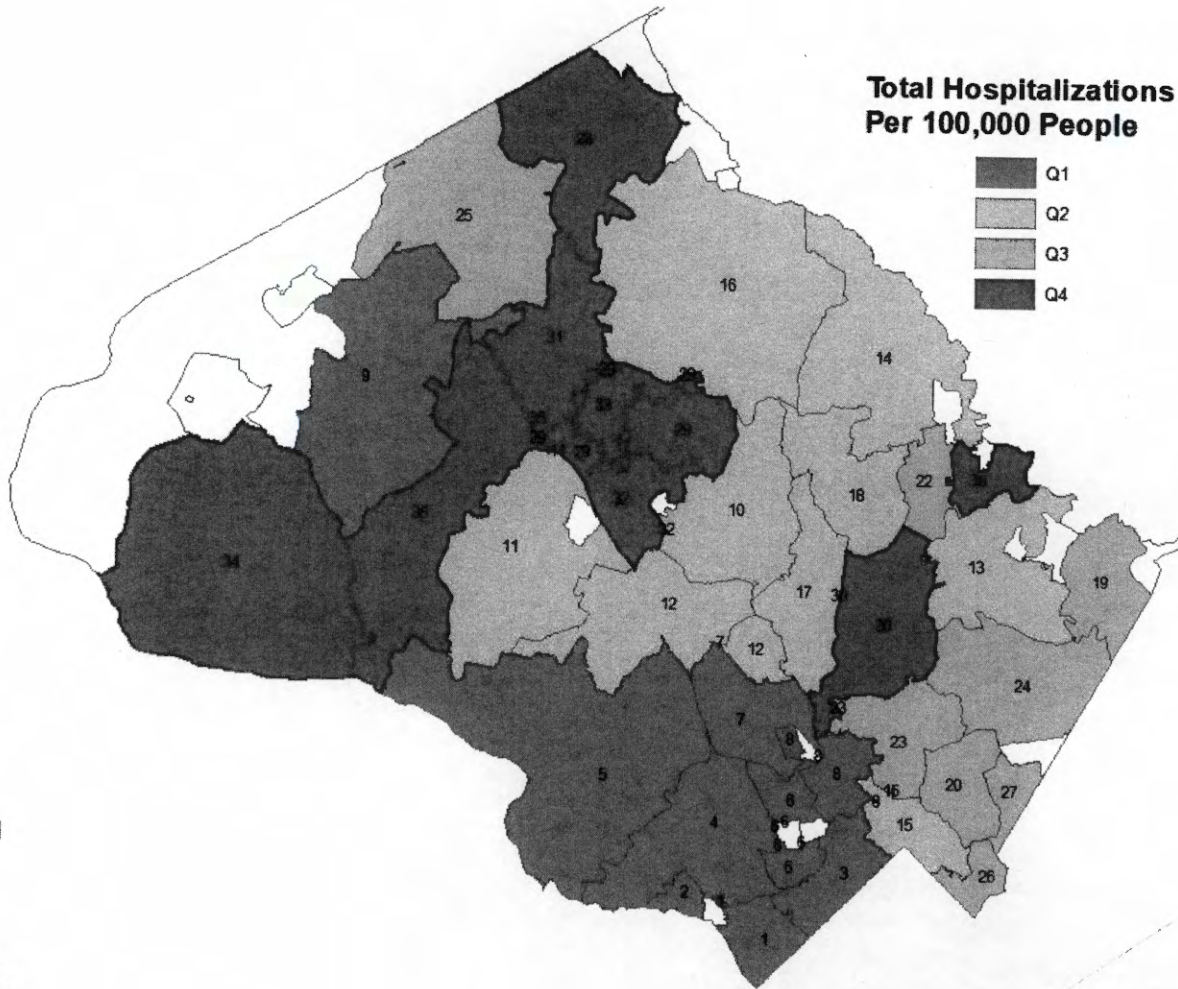
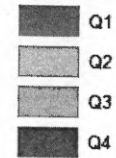


Range: 1,225 – 6,740 years / 100,000 people  
Montgomery County: 3,735 years / 100,000 people





**Total Hospitalizations  
Per 100,000 People**

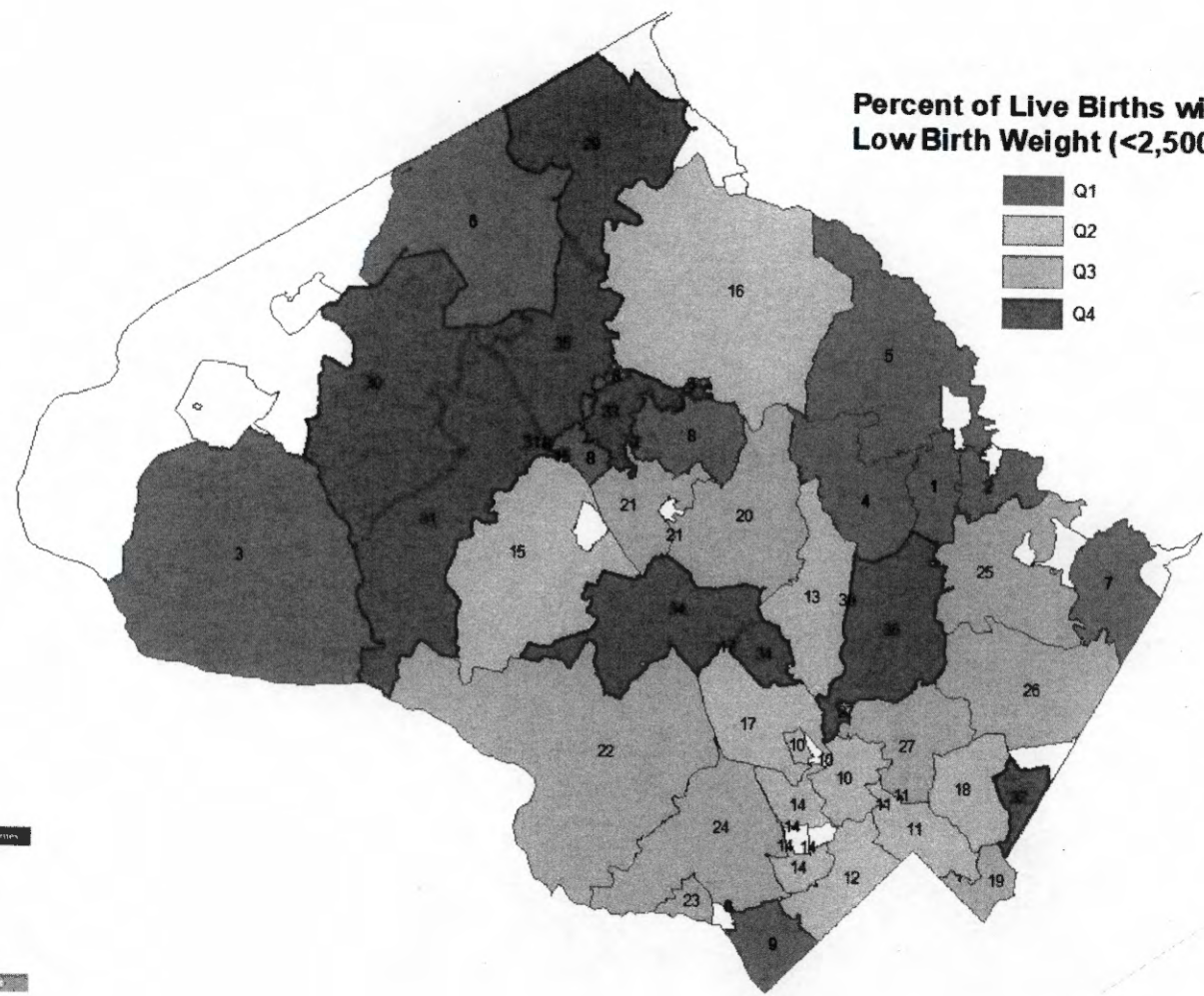
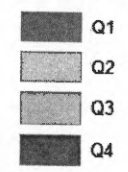


**Range: 6,975 – 52,370 hospitalizations / 100,000 people**  
**Montgomery County: 29,851 hospitalizations / 100,000 people**





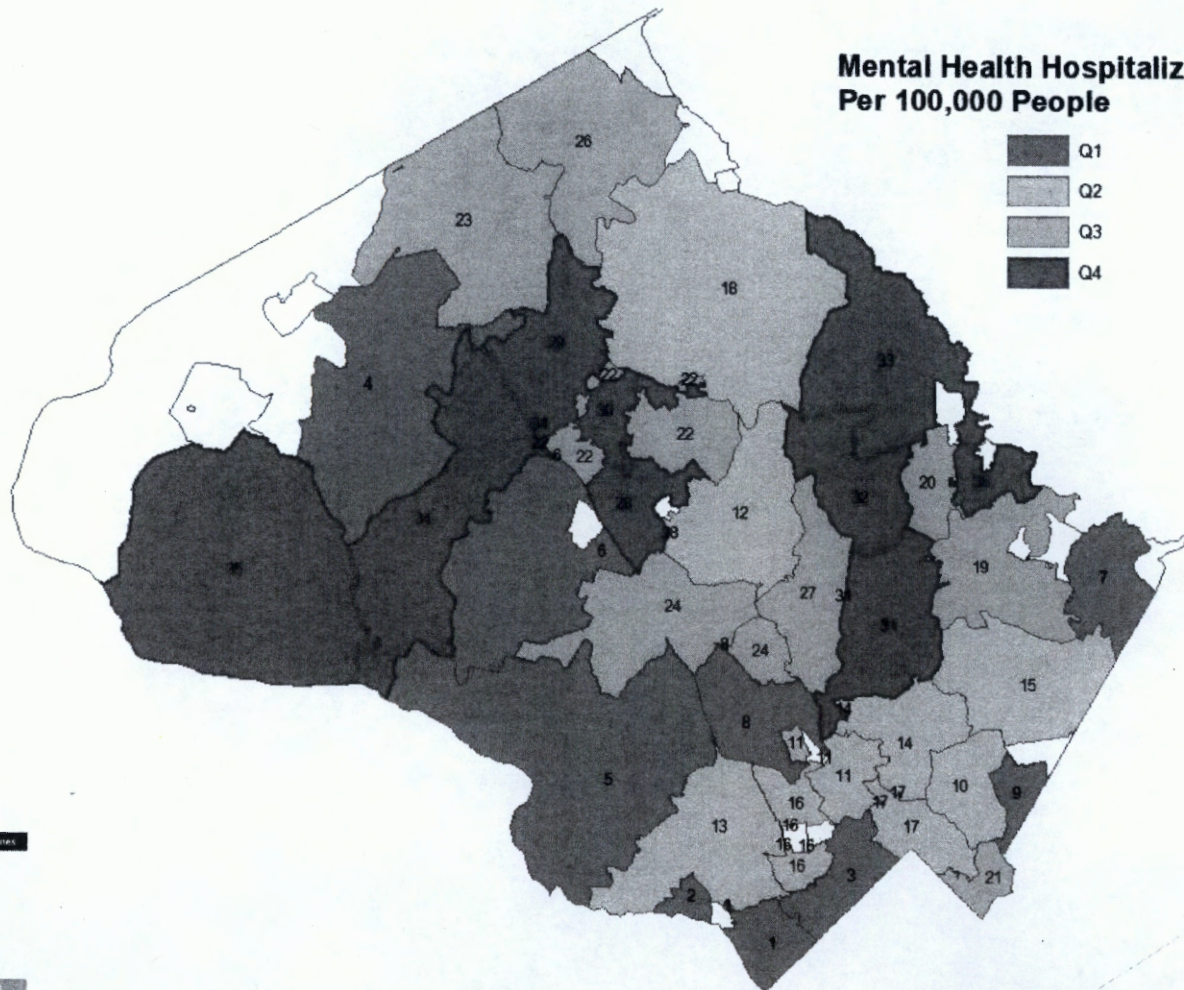
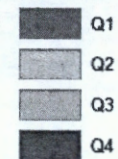
**Percent of Live Births with Low Birth Weight (<2,500 g)**



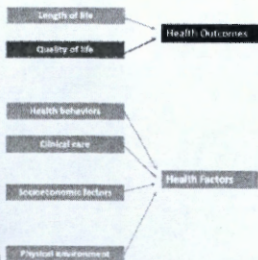
**Range: 2.4% - 9.3%**  
**Montgomery County: 7.3%**



# **Mental Health Hospitalizations Per 100,000 People**



**Range: 765 – 2,836 hospitalizations / 100,000 people**  
**Montgomery County: 1,774 hospitalizations / 100,000 people**

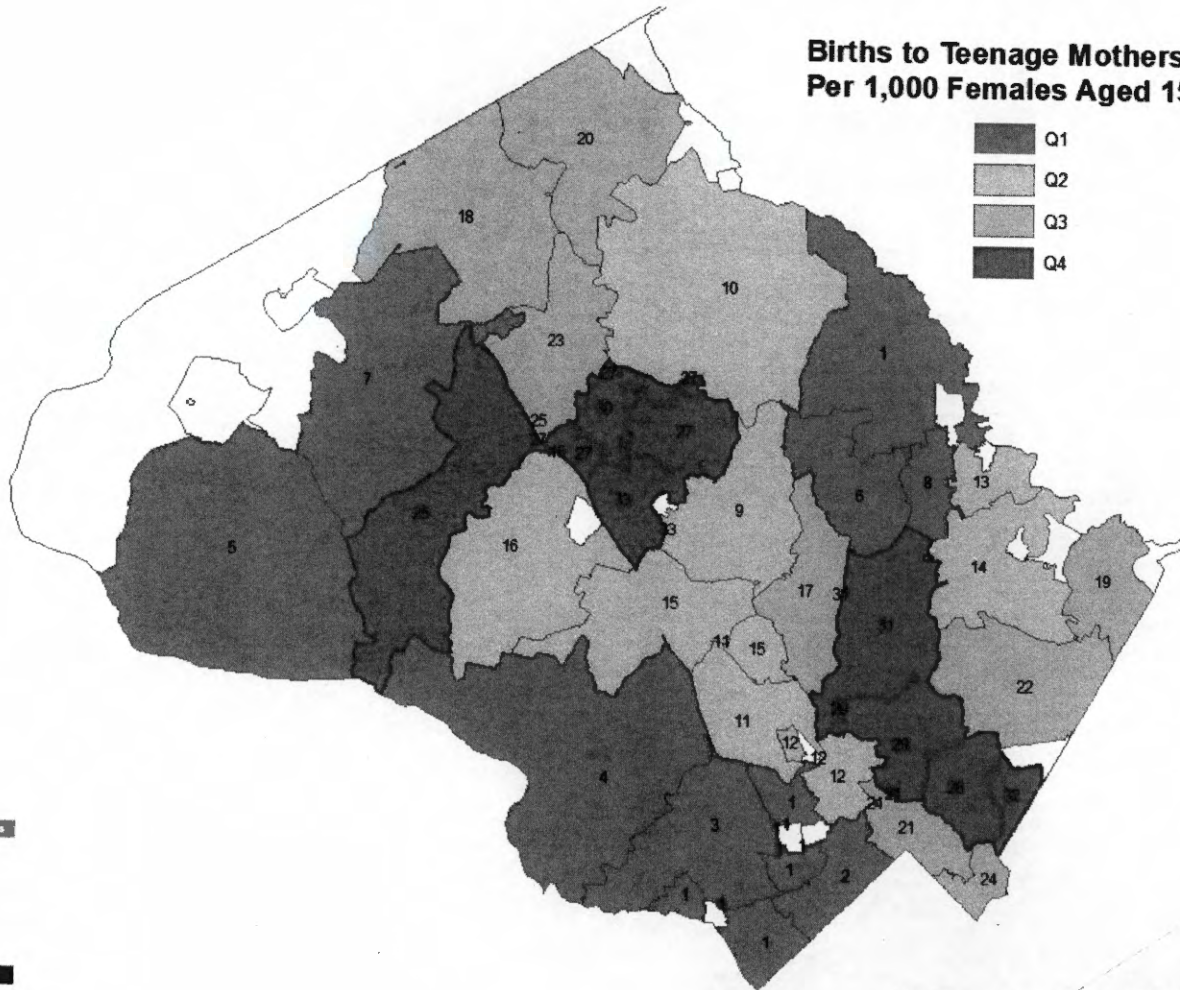
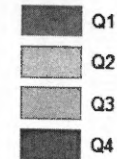




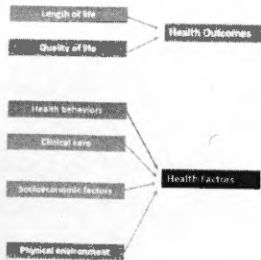




**Births to Teenage Mothers  
Per 1,000 Females Aged 15-19**

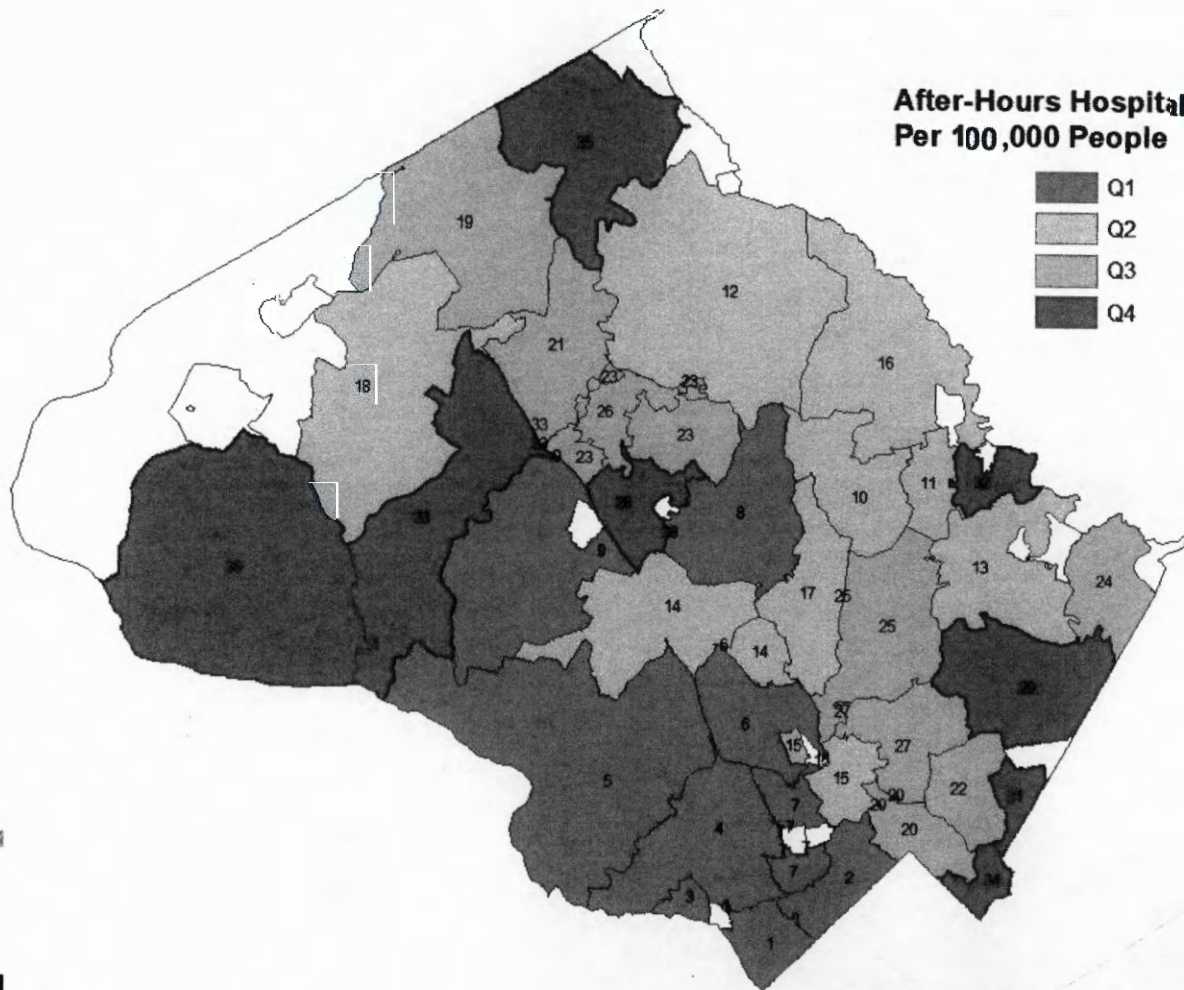
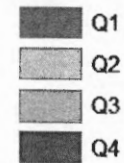


**Range: 0 – 32.4 teen births / 1000 teenage girls**  
**Montgomery County: 11.8 teen births / 1000 teenage girls**





# After-Hours Hospital Visits Per 100,000 People

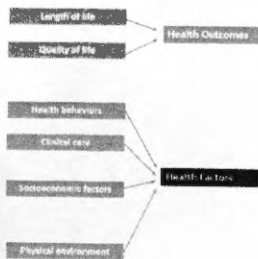
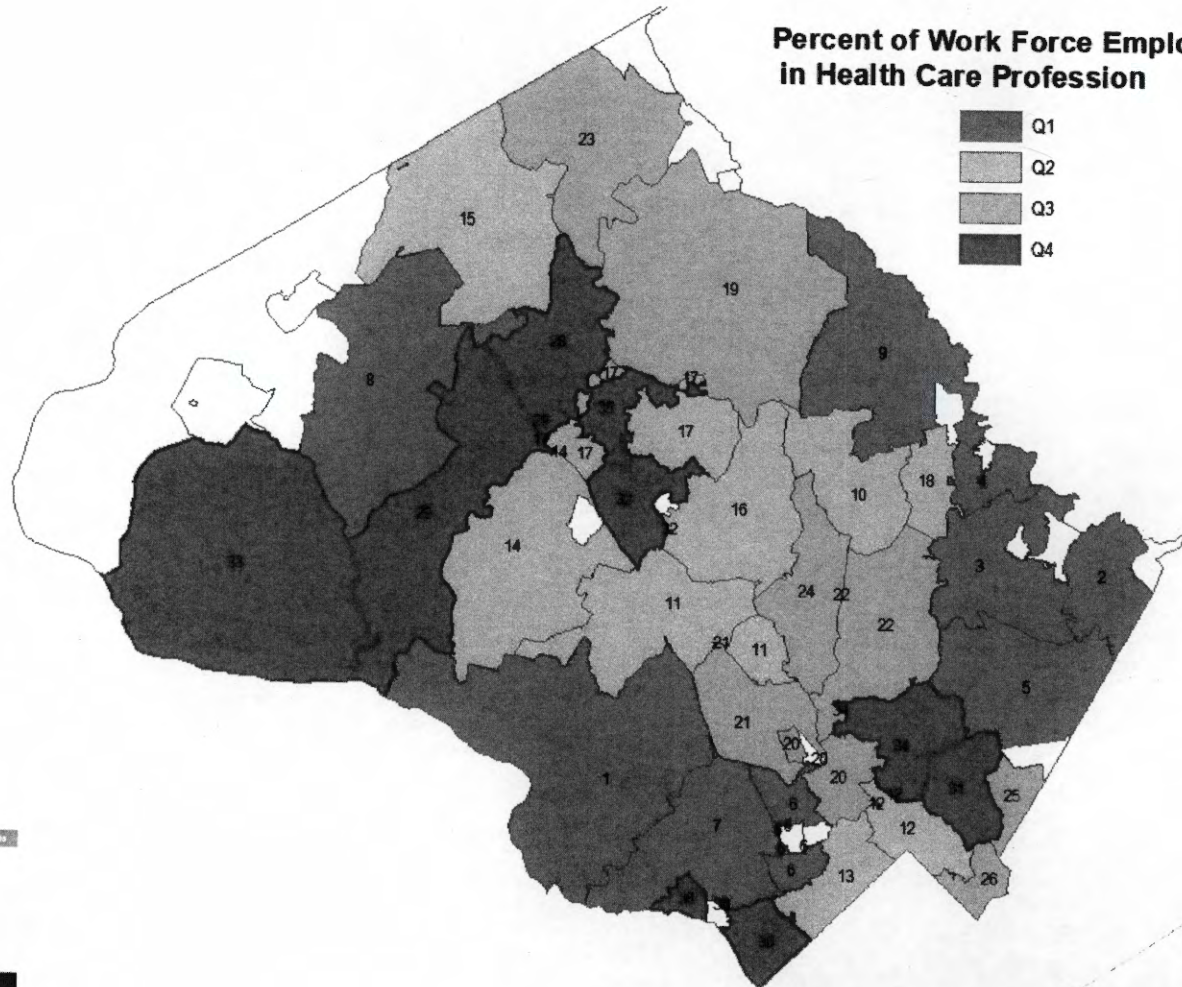
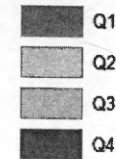


Range: 620.2 – 3,733.5 after-hours visits / 100,000 people  
 Montgomery County: 2,406.4 after-hours visits / 100,000 people



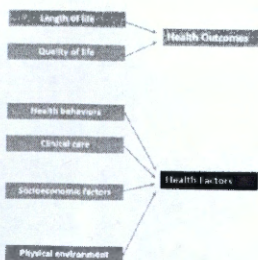
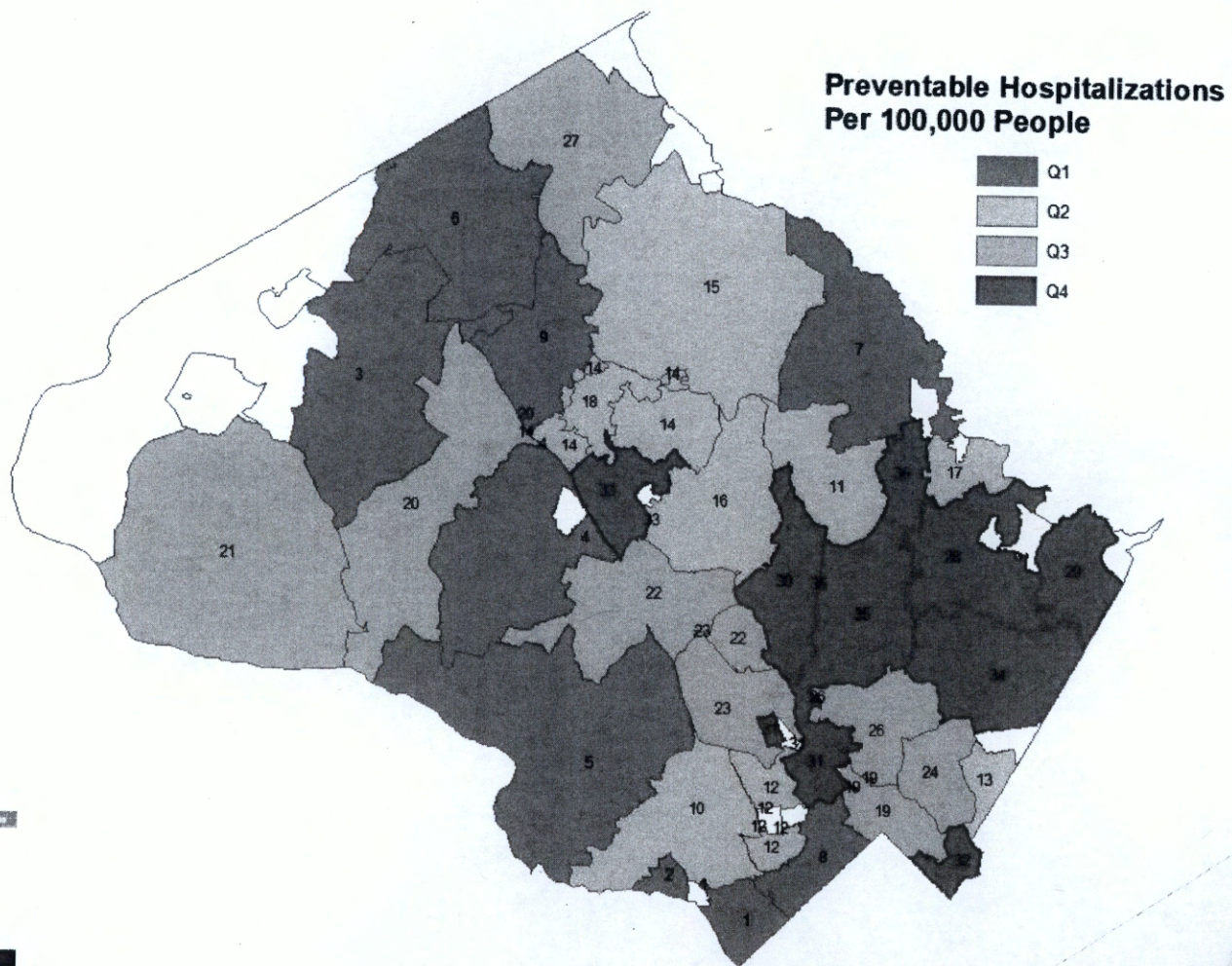


# Percent of Work Force Employed in Health Care Profession



Range: 2.9% - 10.3% of work force is a health care professional  
 Montgomery County: 5.6% of work force is a health care professional

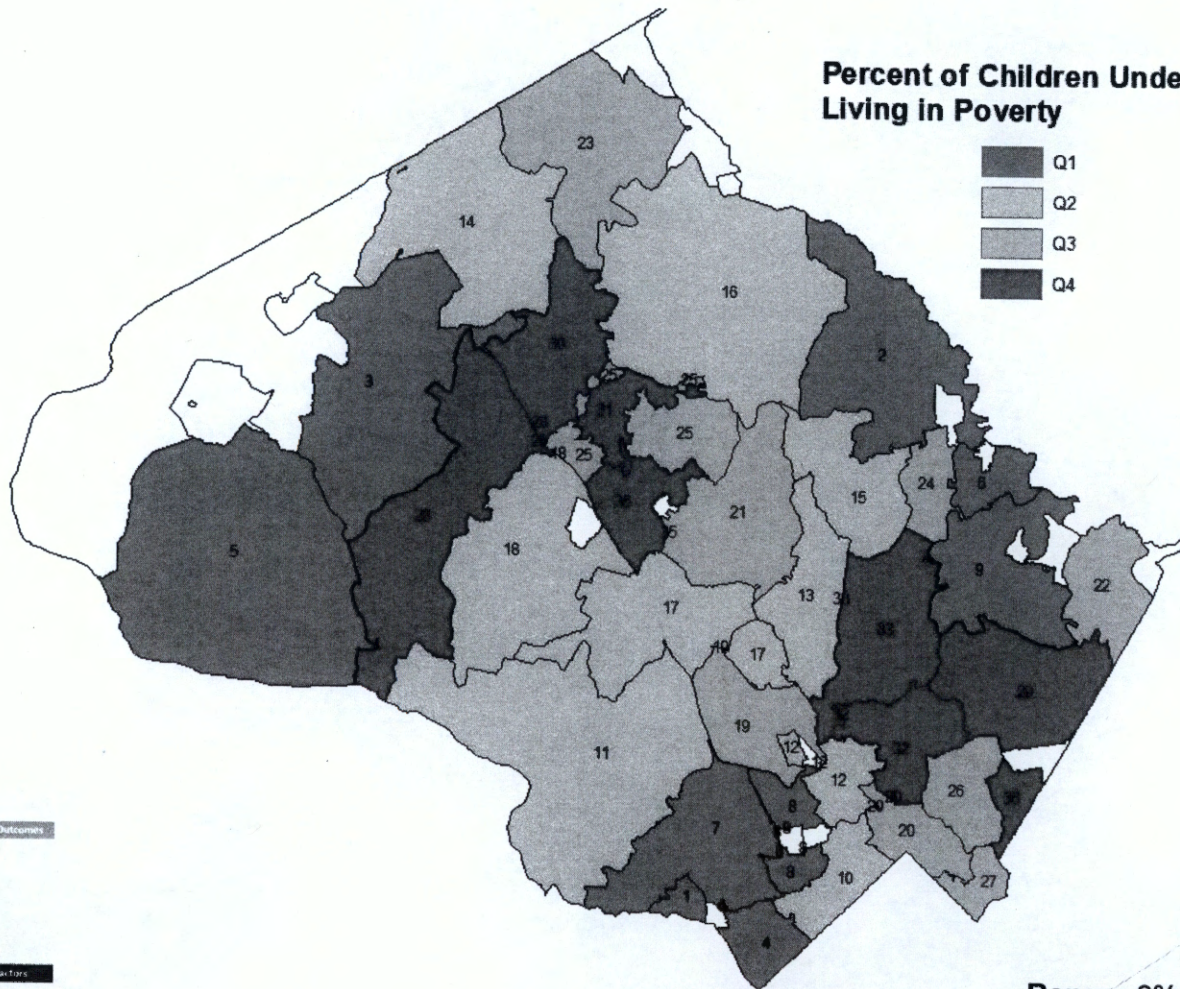




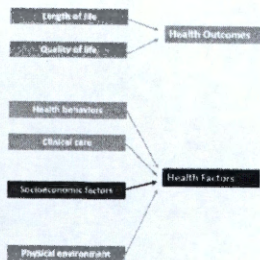
Range: 129.6 – 1,544.6 preventable hospitalizations / 100,000  
Montgomery County: 675.9 preventable hospitalizations / 100,000



# Percent of Children Under 18 Living in Poverty

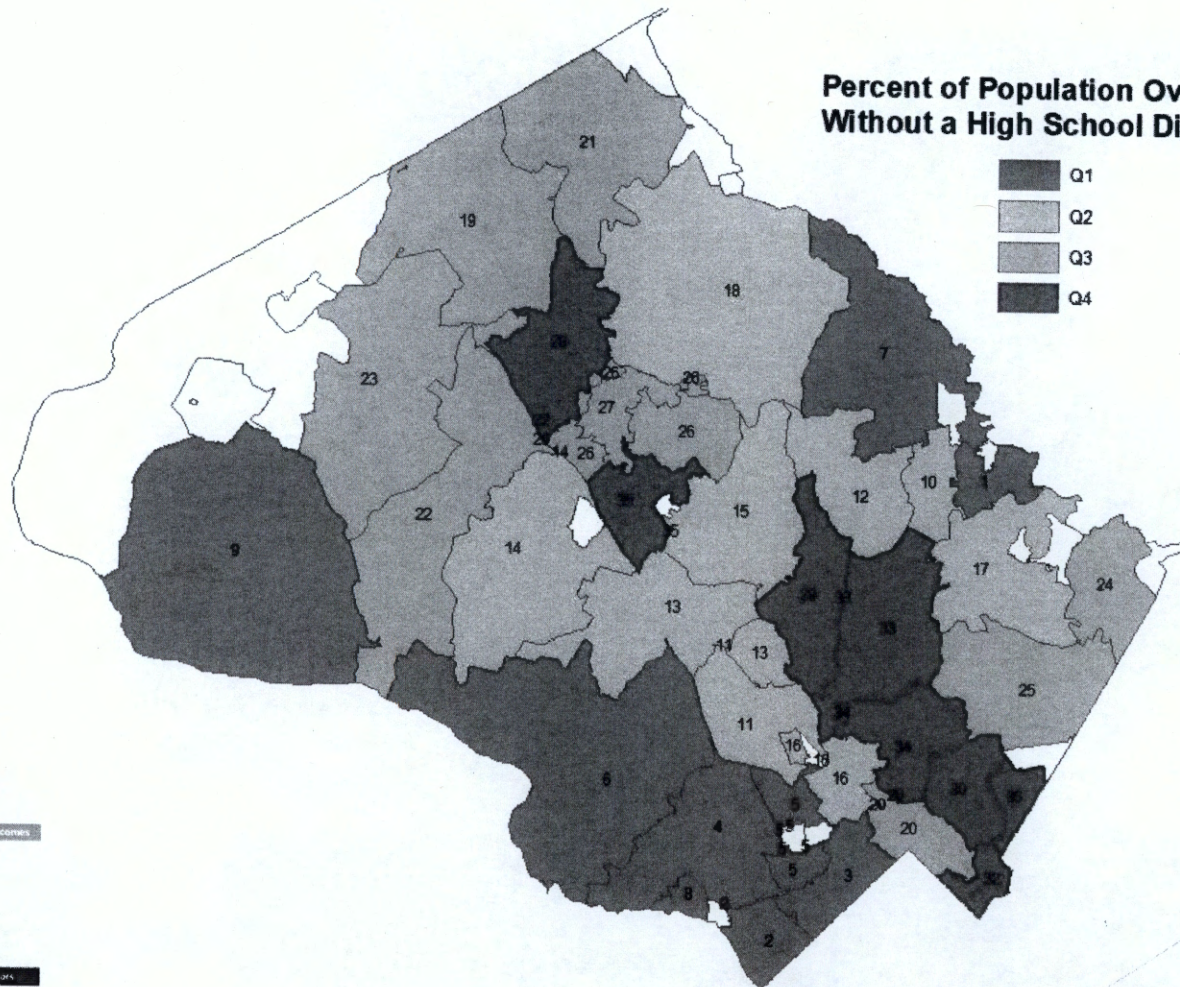
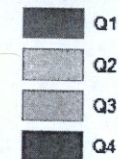


Range: 0% – 20.1% of children live in poverty  
 Montgomery County: 8.5% of children live in poverty

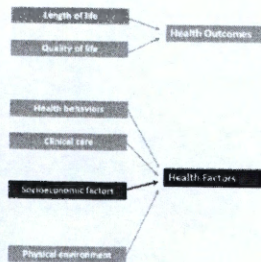




# Percent of Population Over 25 Without a High School Diploma

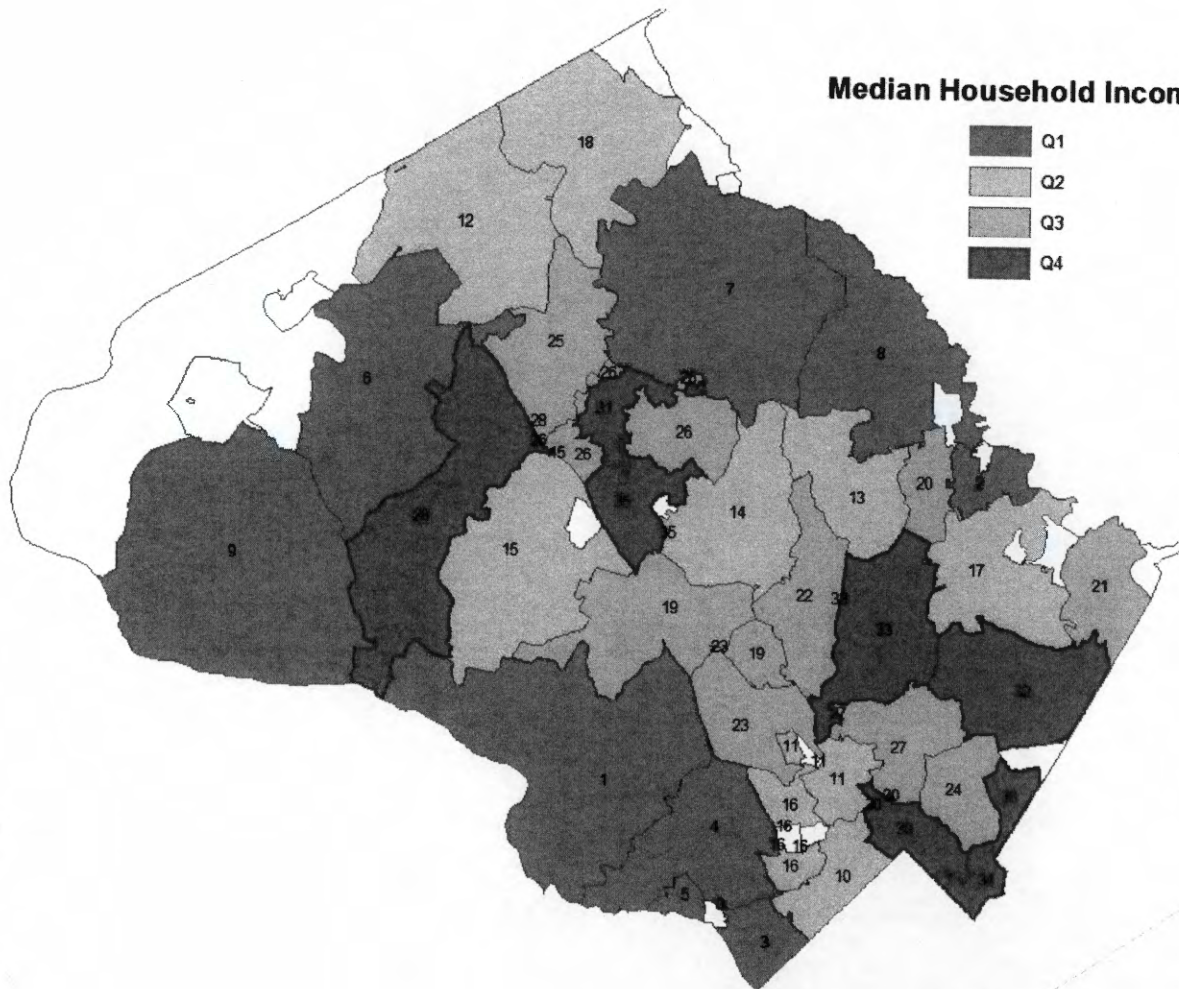
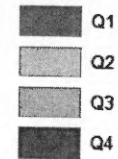


Range: 1.1% - 35.2% of adults over 25 do not have a HS diploma  
 Montgomery County: 8.8% of adults over 25 do not have a HS diploma

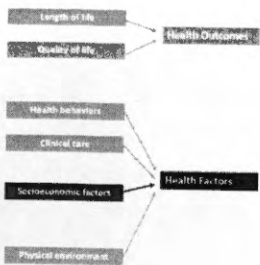




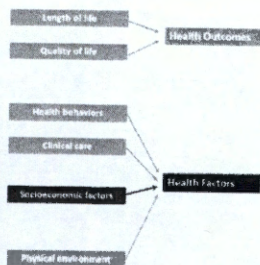
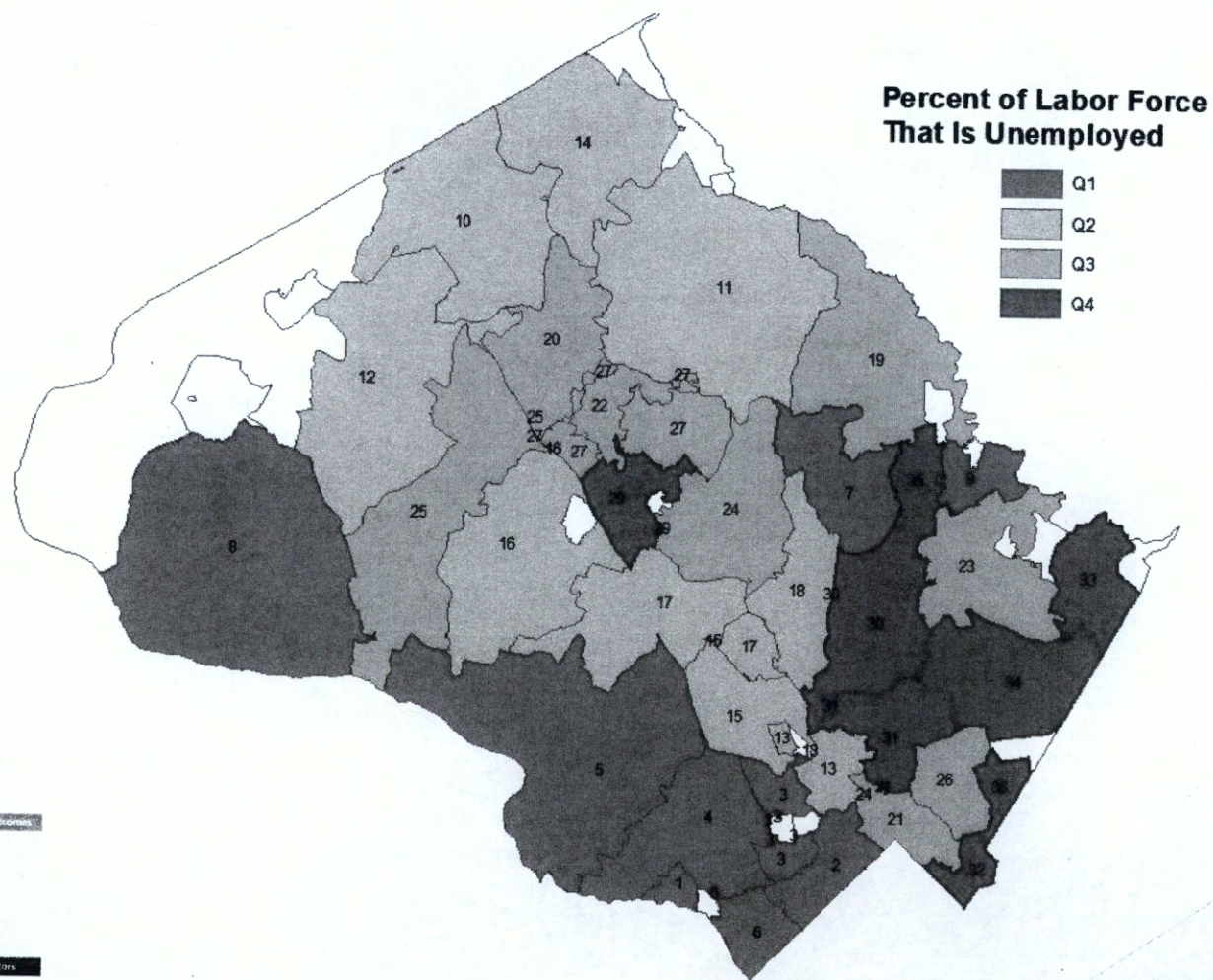
# Median Household Income



Range: \$58,946 - \$195,114 median annual household income  
 Montgomery County: \$99,497 median annual household income



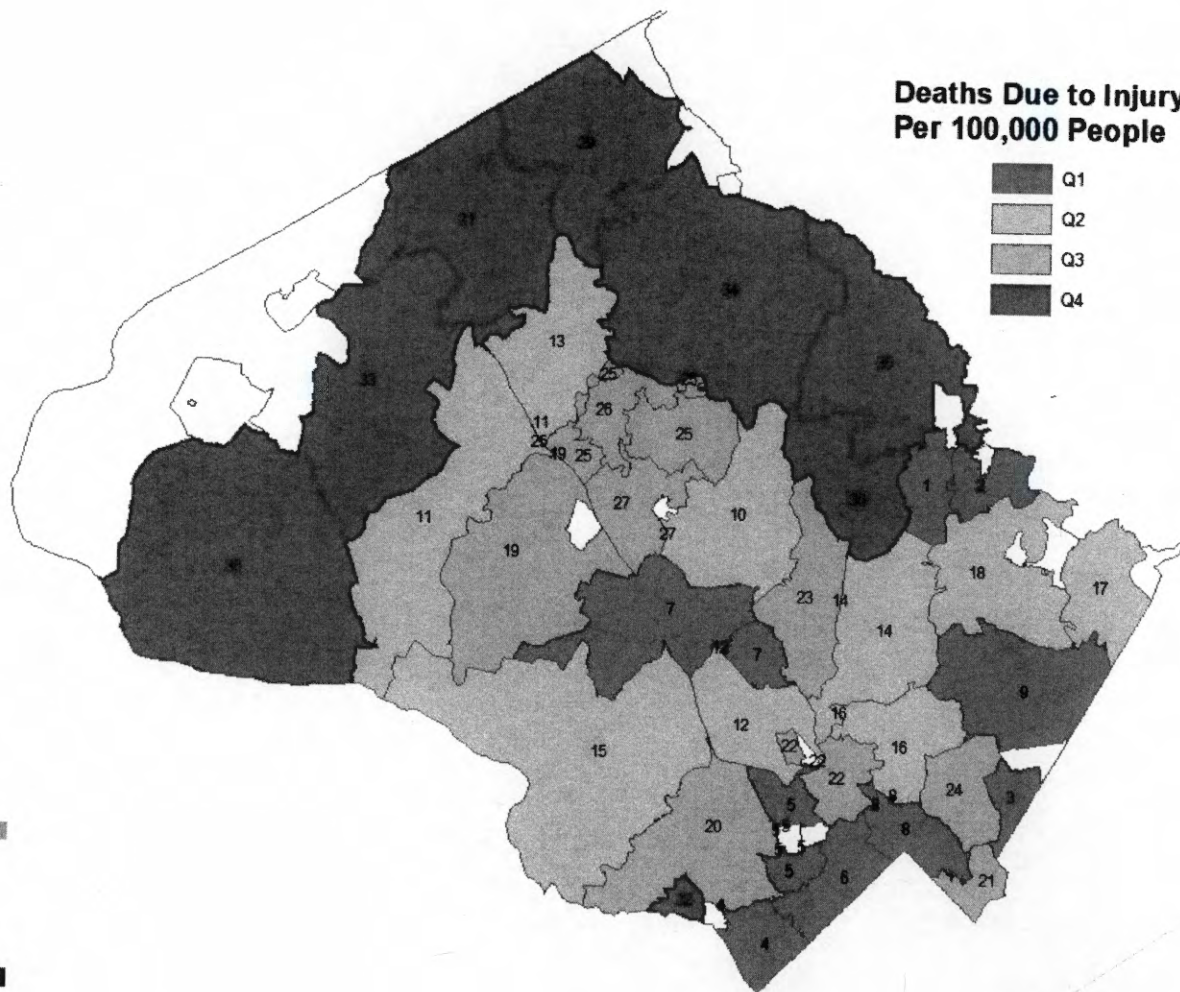
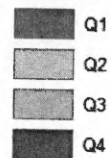




Range: 3.3% - 11.2% unemployment  
 Montgomery County: 6.1% unemployment



# Deaths Due to Injury Per 100,000 People

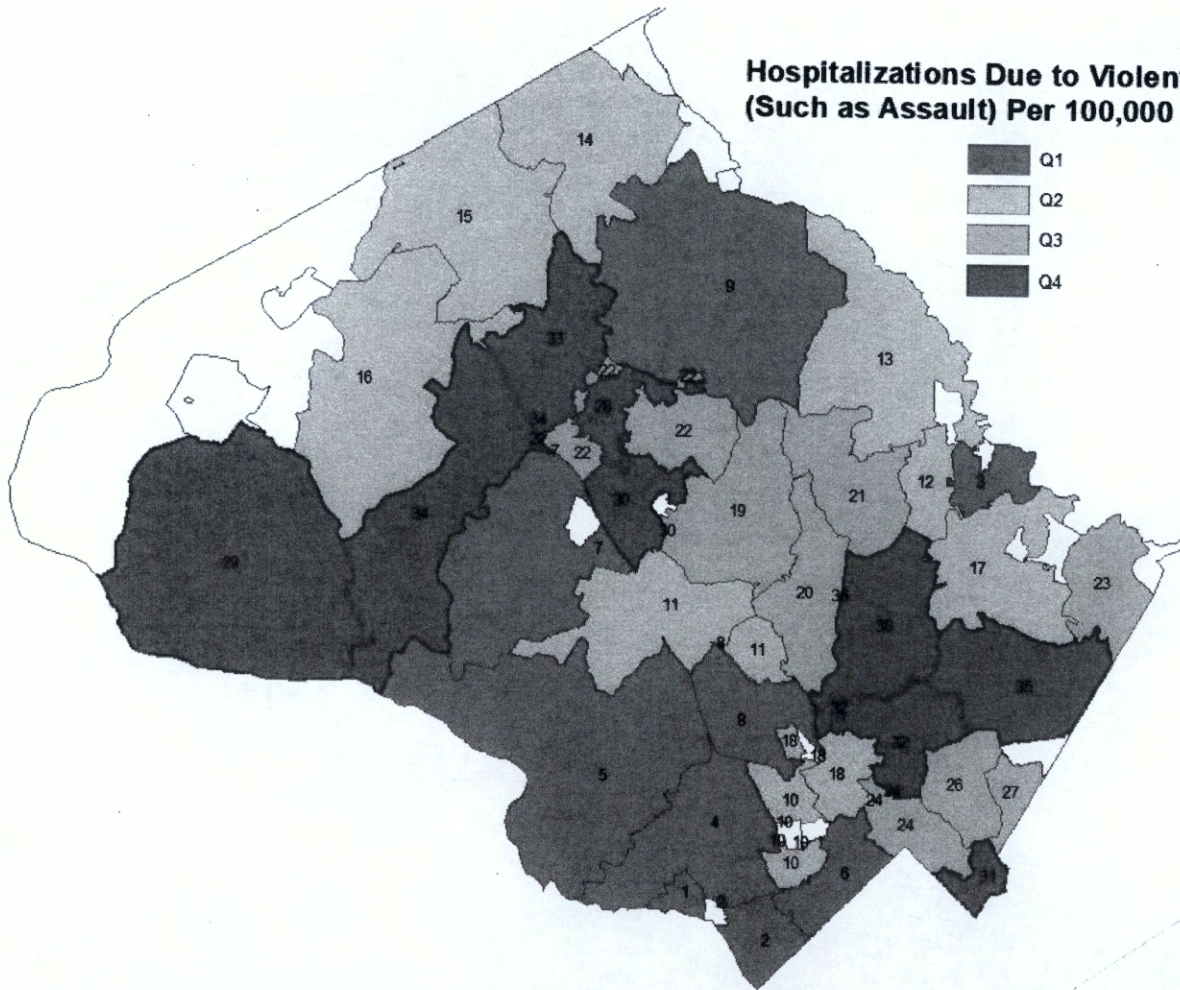
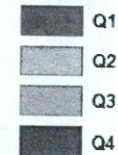


Range: 0 - 84.9 injury deaths / 100,000 people  
**Montgomery County:** 34.8 deaths / 100,000 people





# **Hospitalizations Due to Violent Injury (Such as Assault) Per 100,000 People**



**Range: 17.9 – 248.7 violent injury hospitalizations / 100,000 people**  
**Montgomery County: 157 violent injury hospitalizations / 100,000 people**

