



5. PUBLIC HEALTH

Strategic Analysis Memo | Envision Montgomery 2040 Comprehensive Plan

November 21, 2018

DRAFT

The following outlines the key findings for the Public Health Strategic Analysis. This research integrates initial findings from the Factbook with deeper analysis into key conditions and trends and/or topics proposed by stakeholders. This analysis will serve as the foundation from which plan recommendations are built. This is one in a series of 12 topical memos produced through this phase.

CONTENTS

- | | |
|---------------------------------------|-------------------------------------|
| 1. Introduction | 11. Supermarket Access Map |
| 2. Demographic Overview | 12. Physical Inactivity |
| 3. Overall Health Ratings | 13. Poor or Fair Health |
| 4. Health and the Built Environment | 14. Violent Crime |
| 5. Poverties' Effect on Public Health | 15. Premature Death |
| 6. Individual Public Health Topics | 16. Sexually Transmitted Infections |
| 7. Adult Obesity | 17. Opioid Prescription Rates |
| 8. Diabetes Prevalence | 18. Infant Mortality |
| 9. Food Insecurity | 19. Drinking Water |
| 10. Food Choice Related to Access | 20. Existing Public Health Efforts |

1. Introduction

The Public Health Chapter is focused on the health of the Montgomery community as a whole, and how health trends of the community compare to the state and the nation. Public Health looks at human health at a community scale. This chapter will highlight the many interrelated factors that determine a person's health, including personal behaviors, how persons interact with their physical surroundings, access to health care and education, economic situation, and genetics. Through this analysis, some major challenges and opportunities for Montgomery's public health will be extracted.

MAJOR CHALLENGES/ OPPORTUNITIES

- Developing health policies that are proactive around existing and emergent challenges
- Addressing chronic inequalities in health outcomes
- Understanding the impact of the built environment on community health
- Confronting infant mortality

Overall Health Outcomes: 25	
Length of Life	27
Quality of Life	31
Overall Health Factors: 22	
Health Behaviors	36
Clinical Care	6
Social & Economic Factors	41
Physical Environment	46

2. Demographic Overview

Many factors are associated with the health of a community. Age, race, gender, and ethnicity are important factors on a person's health, but they are also important on a community level. The distribution of these characteristics in a community can affect needed services and resources.

- **Population:** The Population of Montgomery was estimated to be 201,717 residents in 2016.
- **Age Distribution:** Montgomery's median age is 35.1, which is slightly younger than the state's median age of 37.4. However, Montgomery, like the nation, is experiencing a surge of growth in it's over the age of 55 population segment.
- **Racial and Ethnic Diversity:** The largest portion of Montgomery's total population is comprised of Black or African American residents (59%), followed by White residents (35%), Hispanic and Latinx residents of any race (3.5%), and Asian of any race (2.4%). The Black and African American, Hispanic and Latinx, and Asian populations are significantly rising in Montgomery while the White population is significantly decreasing.
- **Education Attainment:** Montgomery has a growing percentage of the population age 25 and older that achieve a college-level degree (37%). Also, the number of adults that do not graduate from high school or receive a GED is declining in Montgomery.
- **Income, Poverty, and Employment:** The median household income in Montgomery (\$43,440) is slowly rising. This steady rise can be seen across the state, but Montgomery's median income is slightly lower than the state level median income.

3. Overall Health Ratings

Among Alabama Counties, Montgomery County ranks 25th (out of 67) in overall health outcomes, and 22nd in overall health factors according to a nationwide analysis by the Robert Wood Johnson Foundation. Officials and organizations across the county utilize the data provided by the County Health Rankings & Roadmaps Program to determine health needs within their communities.

To understand the context of these overall county-level rankings compared to other counties in the State of Alabama, it is important to understand Alabama's overall health rankings and how they compare to other states. According to America's Health Ranking in 2017, Alabama ranked 47 of all 50 states.

Table 1: Montgomery County Overall Health Rankings, County Health Rankings and Roadmaps

State	Overall	Behaviors	Community & Environment	Policy	Clinical Care	All Outcomes
Alabama	47	38	48	23	49	49

Table 2: State of Alabama Health Rankings, Americana's Health Rankings 2017 Annual Report

4. Health and the Built Environment

There is an increasing effort to study the relationship between the built environment and the health of the population that occupies a particular environment. In the context of this analysis, a built environment is defined by the human-made surroundings that are the setting of a community’s daily activity. Although there are differences in how subsets of a population interact with their built environment (age, income level, and individual behaviors), research has found that the built environment can both positively and negatively affect people’s activity levels, their mental and social health, and well-being.

The majority of studies on this topic focus on physical activity’s relationship with the built environment’s level of pedestrian-friendliness, also known as walkability. Findings suggest that people living in walkable communities (higher residential density, a mixture of land uses, and connected street networks) have higher levels of daily walking, and are more physically active with lower body mass index’ (BMI) than those who live in less walkable communities. Studies have also found a positive correlation between health and individual built environment features, such as the aesthetics of the street, quality of destinations, public parks, and perceived safety. In particular, one study found a positive correlation between an area’s type II diabetes prevalence, and its vacant homes and crime. Another study found a positive correlation with density, walkability, and greenspace with life longevity of older adults.

More and more, the built environment is being considered a foundation for health and wellness. Understanding the role, the built environment plays in Montgomery’s public health is an important part of this analysis report.

5. Poverties' Effect on Public Health

A person's socioeconomic status is often considered the most accurate predictor of their health. Socioeconomic status is a term used in the measurement of income, education, and social status. With income being the most powerful correlation between health and socioeconomic status, it is important to highlight poverty levels and trends in Montgomery when considering public health.

In 2016, 22.6% (44,267) of Montgomery's population was living below the poverty level. Almost 40% of those under the poverty level are under the age of five. Traditionally, Alabama ranks among the lowest in the country for average life expectancy. In a recent study, Alabama ranked last in life expectancy inequalities related to income. Between 1980 and 2010, affluent men in Alabama lived on average ten years longer (84) than poor men (74). Poverty affects health in a number of ways, including access to treatment, access to nutrition, and heightened exposure to harmful stimulus. In 2015, heart disease was the leading cause of death in Alabama. 25% of premature deaths in Alabama were related to heart disease. According to a 2009 study published in the American Journal of Epidemiology, those who were exposed to poverty in childhood and adulthood were 82% more likely to develop heart disease than those who were not exposed to long-term poverty.

Individual Public Health Topics

Looking at specific health topics increases our understanding of individual public health issues through the context of Montgomery County's statistics from the Robert Wood Johnson Foundation's County Health Rankings & Roadmaps Program. Highlighting these individual issues also provides a more comprehensive understanding of the interrelated nature of public health and the broader community context.

6. Adult Obesity

In 2016 Alabama had the 3rd highest obesity rate in the country - a country that ranked number one as the most obese country in the world. Montgomery County has consistently had a higher adult obesity rate than the state, thus making Montgomery's obesity rates among the highest in the world.

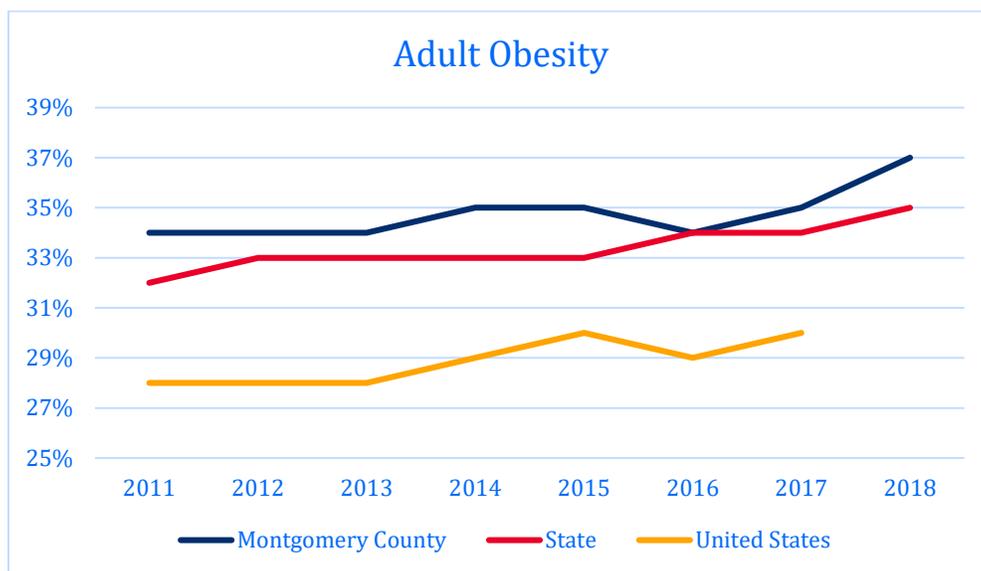


Table 3: Adult Obesity Rates, County Health Rankings and Roadmaps

7. Diabetes Prevalence

In 2016 Alabama had the 2nd highest diabetes rate in the country. Montgomery County did see a decline in 2018, but Montgomery County is consistently higher than the national average.

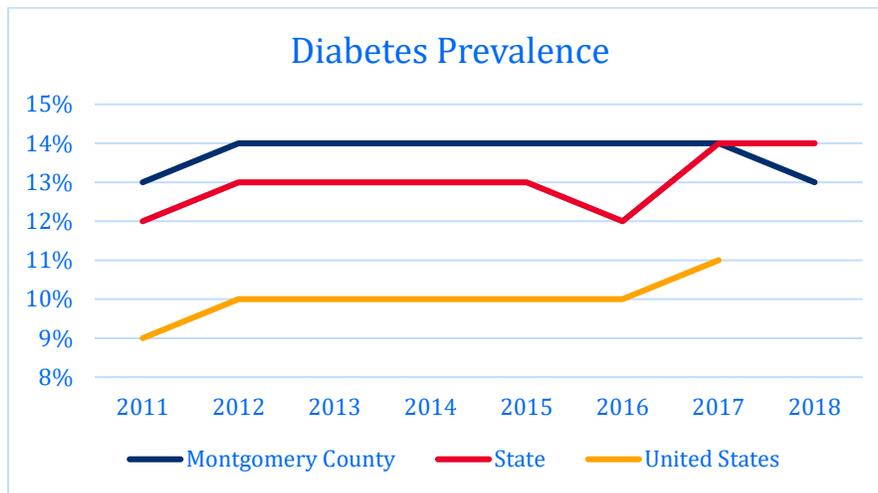
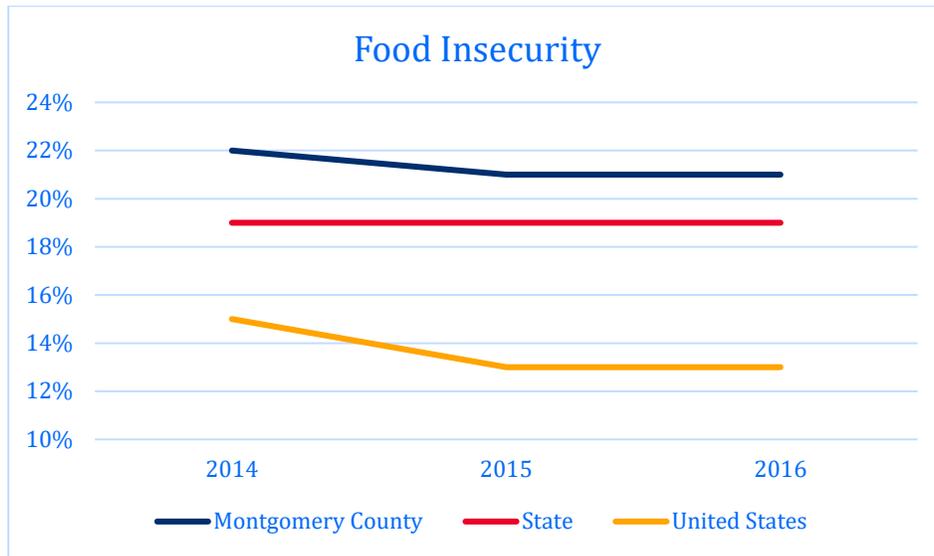


Table 4: Diabetes Prevalence, County Health Rankings and Roadmaps

8. Food Insecurity

Food Insecurity is another aspect of health and the built environment, affecting both obesity rates and diabetes prevalence. Food insecurity is defined as the percent of the population who lack adequate access to food. In 2016, 21% of Montgomery County was affected by food insecurity, compared to 19% at the state level, and 13% at the national level.

Table 5: Food Insecurity, County Health Rankings and Roadmaps

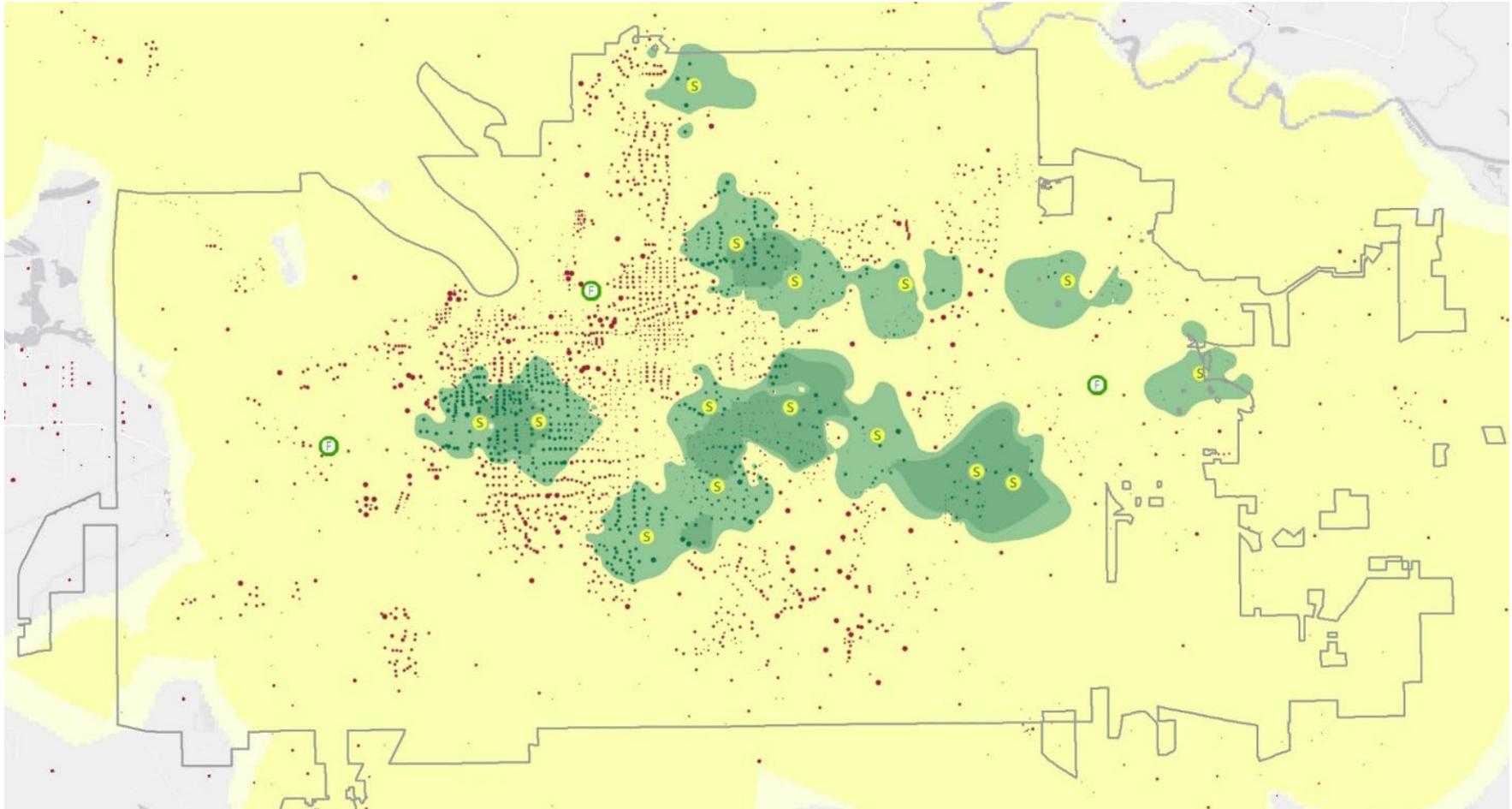


9. Food Choice Related to Access

Physical access, financial access, and personal choice play a daily role in what kind of food choices a community makes. Many parallels can be seen between the health of a community and their access to healthy foods. One important outlier when looking at access to healthy food is understanding the prevalence of the alternative, fast food. In 2018 Alabama had the most fast food restaurants per capita in the county, with 6.3 restaurants per 10,000 residents. According to a 2011 study Alabamians spent 60% of their annual dining out budget on fast-food.

10. Supermarket Access Map

Supermarkets are a convenient way to access healthy foods. This map (next page) shows the spatial relationship in the City of Montgomery between supermarkets, and people in poverty. The green shapes represent areas within a one-mile walk to a supermarket. The green dots in those areas represent various numbers of people in poverty that are within a one-mile walk to a supermarket. The red dots represent various numbers of people in poverty that have low access to supermarkets and presumably healthy food.



11. Physical Inactivity

Physical Inactivity is the percentage of the population ages 20 years of age and older that report having no leisure-time physical activity. Physical inactivity is another reporting measure that is related to other health outcomes and the built environment. In 2017, 27% of the population in Montgomery County reported being physically inactive, which was slightly lower than the state’s 28%, and 23% of the nation.

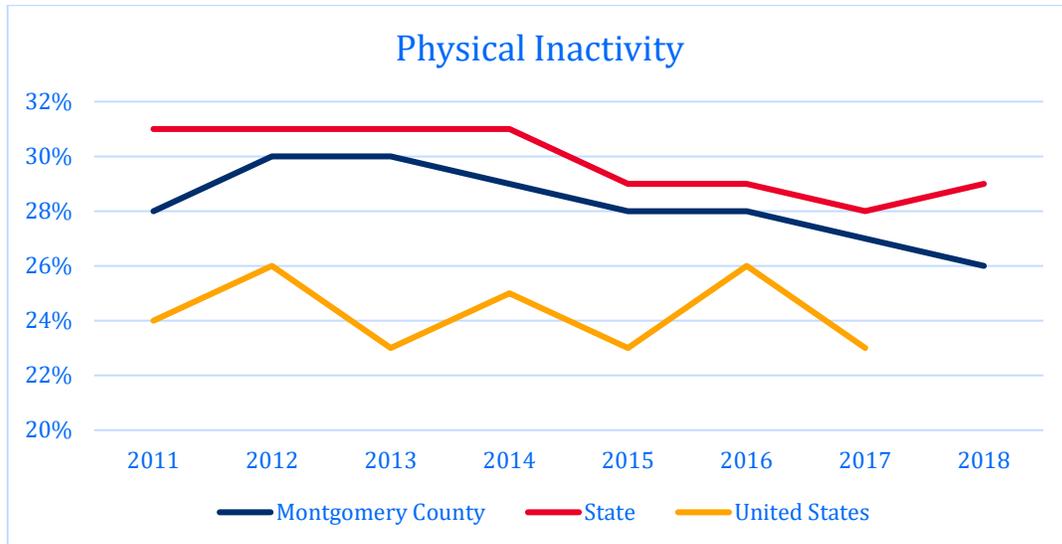


Table 6: Physical Inactivity, County Health Rankings and Roadmaps

12. Poor or Fair Health

The percent of the population in Montgomery County that reports their health as fair or poor is on the rise. Poor and fair health measures the percentage of adults who consider themselves to be in poor or fair health when asked the question: “In general, would you say your health is excellent, very good, good, fair, or poor?” In 2016, 24% of Montgomery County reported to having poor or fair health, compared to 22% at the state level, and 18% at the national level.

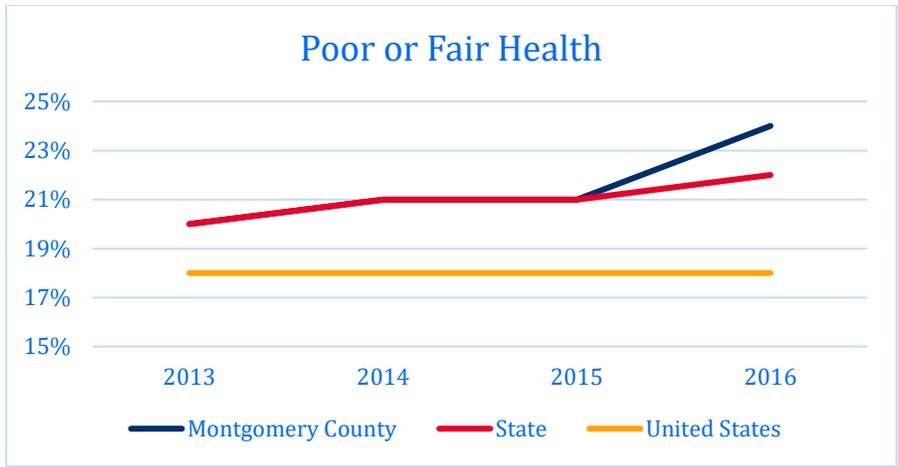


Table 6: Poor and Fair Health, County Health Rankings and Roadmaps

13. Violent Crime

Violent crime in Montgomery County is lower than the state level but higher than the national level. Violent Crime is recorded by the number of violent crime offenses per 100,000 population.

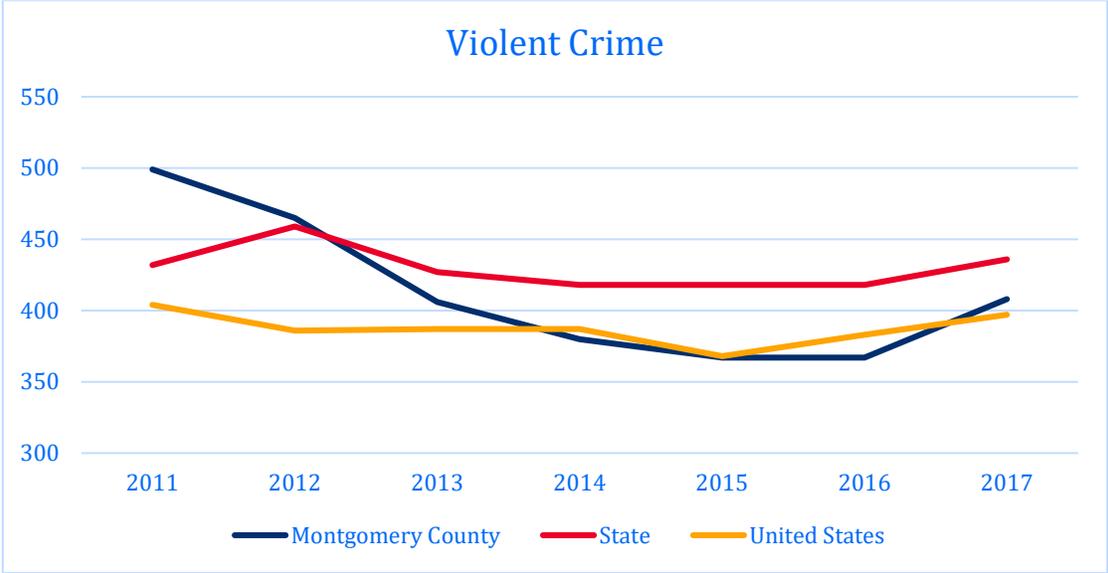


Table 7: Violent Crime, County Health Rankings and Roadmaps

14. Premature Death

Premature death is defined as years of potential life lost before the age of 75 per 100,000 population. Premature death in Montgomery has held relatively steady over the years and has followed closely with the state level, but both the county and the state are significantly higher than the nation.

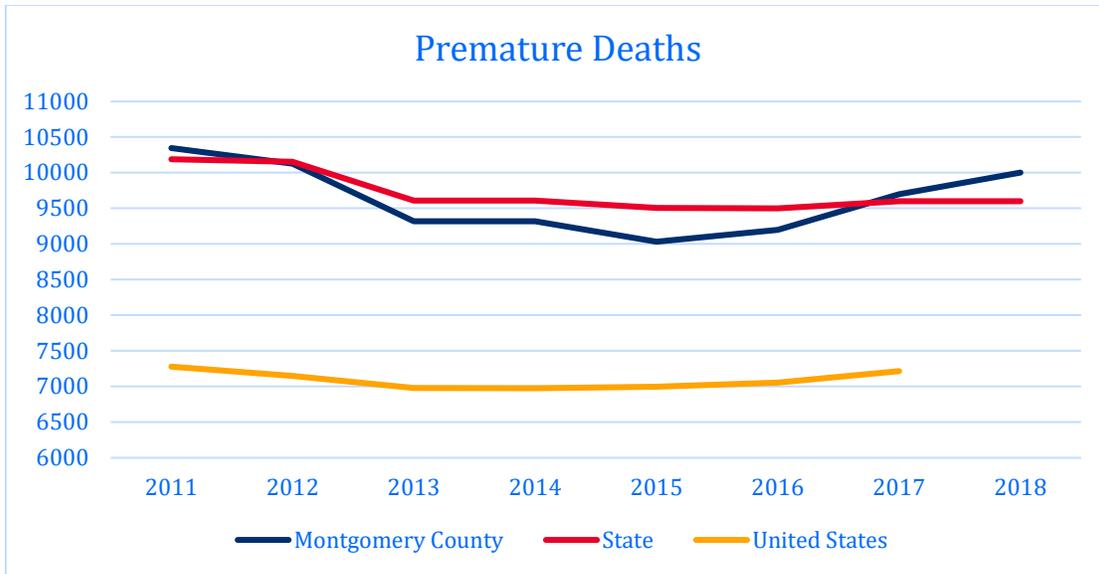


Table 8: Premature Deaths, County Health Rankings and Roadmaps

15. Sexually Transmitted Infections

The rate of Sexually Transmitted Infections has been growing in Montgomery County but did drop slightly in 2017. Sexually Transmitted Infections are measured by the number of newly diagnosed chlamydia cases per 100,000 population. In 2016 and 2017 the Sexually Transmitted Infections rate in Montgomery County was double the state-wide rate.

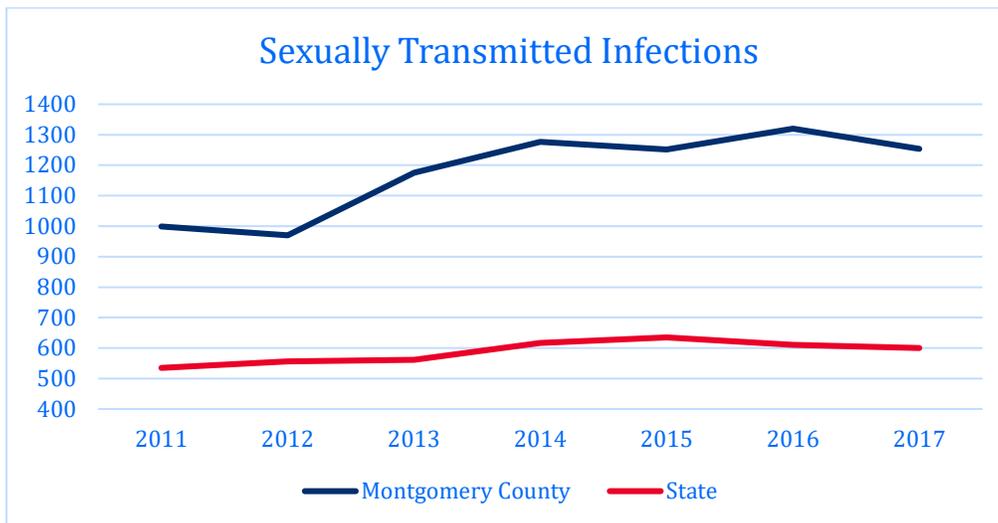


Table 9: Sexually Transmitted Infections, County Health Rankings and Roadmaps

16. Opioid Prescription Rates

The opioid prescription rate is defined by the number of retail opioid prescriptions dispensed per 100 persons per year. The State of Alabama has had the highest opioid prescription rate in the Nation since 2012. Montgomery County prescription opioid rates are constantly lower than the state-level but are significantly higher than the national average.

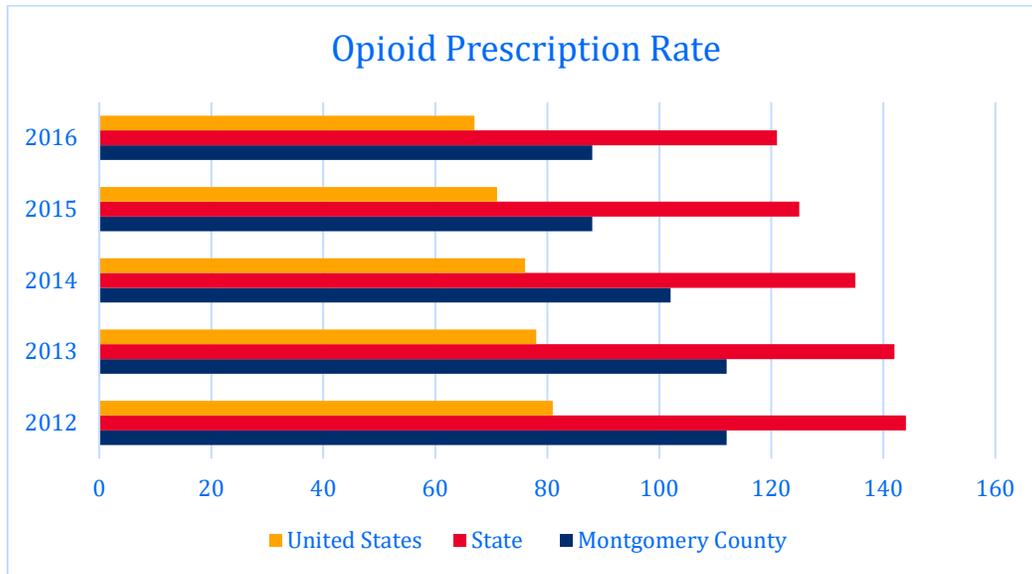


Table 10: Opioid Prescription Rates, CDC Opioid Prescription Rate Maps

17. Infant Mortality

Montgomery County's infant mortality rate is among the highest in the country. Infant Mortality is defined as the number of deaths under one year of age occurring among the live births in a year, per 1,000. In 2016 Montgomery County's infant mortality rate (as a whole) was almost double the nation's infant mortality rate. However, when broken down, there is a vast discrepancy between infant mortality rates of Whites and African American or Blacks in Montgomery County. The rate for whites in Montgomery County was 5.8, slightly below the national rate, and the rate for African American or Black in Montgomery County was more than double (13.8).

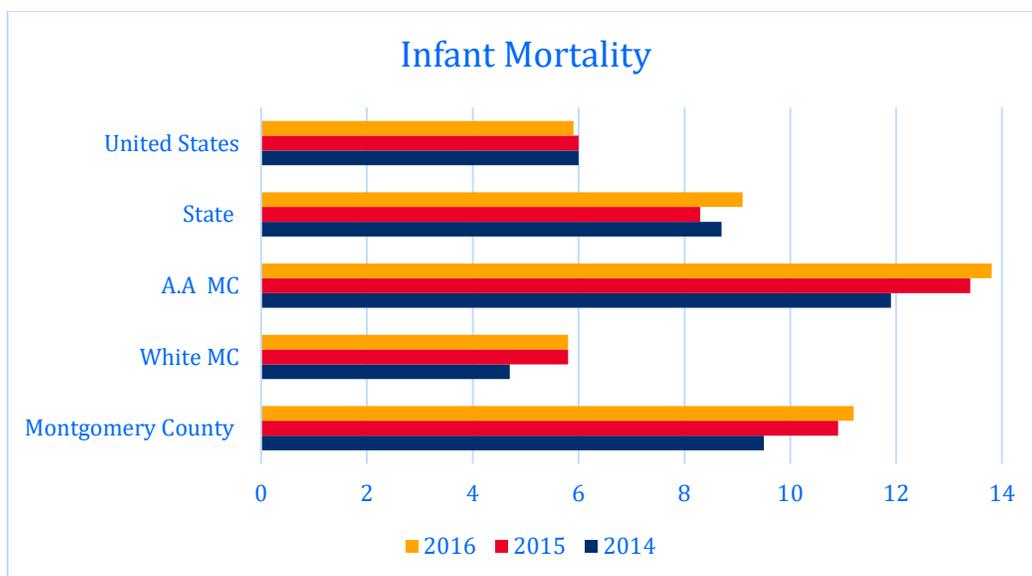


Table 5: Infant Mortality, ADPH Infant Mortality Rates by County

18. Drinking Water

Historically Montgomery's drinking water came from well fields in West and North Montgomery, drawing groundwater from high-quality underground aquifers. But, as the population of Montgomery continued to rise this method of service was unsustainable, and in 1965 Montgomery built its first water purification plant on the banks of the Tallapoosa River. Today Montgomery's water needs are primarily served by two water treatment plants the: the C.T. Perry Water Purification Plant, and the Hanan Water Treatment Plant. The remainder of the water needs are served by the Day Street Pump Station and Montgomery's updated well systems. Whether the source water comes through a treatment facility or ground wells, it flows through a complex water system before it gets to a tap. This water system includes a system of pumps, additive stations, clear wells, and tanks.

The Source of drinking water in Montgomery include rivers, streams, reservoirs, ponds, springs, and wells. Montgomery tests the sources of its water, and it's water quality processes yearly to ensure that the city's water does not contain harmful amounts of contaminants. The city of Montgomery is consistently working with EPA regulations and standards to ensure its drinking water is safe.

19. Existing Public Health Efforts

Montgomery's public health effort is a multifaceted approach; key players include private practice health professionals and hospitals, the many non-profit organizations in the river region focusing on a number of public health issues, and the Montgomery County Health Department. The Health Department offers many public health services including disease prevention, youth health programs, family planning, and home-based services. According to the 2017 Montgomery County Health Department Annual Report, the health department provided WIC services to a monthly average of 9,351 at-risk parents and youth and provided free breast and cervical cancer screening to 123 uninsured/underinsured women, and provided over 5,000 home care visits.