Social Determinants of Health

Overview
Many of the factors that affect health are interrelated. Completing high school makes it more likely that one can get a job; additional education often allows one to get a higher paying job. Higher income allows a family to choose to live in better housing without having to spend an excessive percentage of the household’s income on housing and makes purchase of a healthy diet more affordable. Higher educational attainment and higher household income are also associated with smaller family size so that the resources available for each family member’s health needs are greater. Life expectancy is greatest where these factors come together.

The social determinants of health topics included in this section are:
- Poverty
- Race and Ethnicity
- Housing
- Education
- Employment Status
- Environment
- Social Environment

More detail on each of the indicators that measure attributes of the social determinants of health topics can be found in Appendix X.

County Area Characteristics
The American Community Survey (ACS) statistics summarized here show great variation across the County. By comparing the average for each County sub-area to the overall County average, it is evident that there is clustering of some of the key social determinants of health in the County sub-areas. Broadly speaking, these data suggest that the populations in the Takoma Park and Silver Spring areas may be at higher risk of poor health status than County residents in general because indicators of economic status, employment, and educational attainment are generally lower. In contrast, the populations in Bethesda and Up-County areas may be at lower risk of poor health, given their generally higher social determinant indicators.

Geographies
For many social determinants of health topics, data below the County level are available at the Public Use Microdata Area (PUMA) level. The seven PUMAs within Montgomery County are shown on the map below and encompass the following sections of the County.
### Montgomery County Public Use Microdata Areas (PUMA)

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Indicators that can be calculated from ACS data include the socio-demographic characteristics of the population (age and gender distribution, race/ethnicity, and household composition), economic indicators (household income, households receiving public assistance, households spending more than 30 percent of their income on housing expenditures, and residents living in poverty), employment status, and educational achievement.

Each social determinant of health topic includes:
- An introductory paragraph that provides the overall context of the topic area;
- A Summary of Key Data Findings section that presents the Healthy Montgomery indicator results, including subpopulation indicator findings, when available. The text in bold is the wording of the Healthy Montgomery indicator;
- Graphics that highlight one or more indicator findings;
- A Community Perspectives section that summarizes the input from the Healthy Montgomery Community Conversations when applicable;
- A Key Definitions section that presents definitions used in the Summary of Key Findings section;
- A Data Sources Used section that lists the data sources used in the introductory paragraph and the Findings section; and
- A Data Gaps Identified section that lists data that would help us further understand the topic but are not currently available to us.

Poverty

Poverty and Life Expectancy
The causes of death vary across the life-span. Impoverished neighborhoods tend to have higher death rates among infant, child, and adolescent populations than rich neighborhoods. Diseases such as diabetes, stroke, and high blood pressure are the major contributors to high mortality rates among adults and older adults, with these conditions also disproportionately affecting the poor.¹ These chronic diseases can often be linked directly to obesity, which in turn is associated with poverty.

Poverty and Nutrition
Poor neighborhoods often do not have access to healthy foods. The majority of low-income neighborhoods do not have supermarkets that sell healthy foods, such as fresh fruits and

vegetables and lean meat and poultry.\textsuperscript{2} Individuals without access to healthy food options may be more likely to be obese and less likely to have healthy intakes of essential nutrients.\textsuperscript{3} In the United States, states with the highest rates of obesity are also the poorest and most isolated, such as those located in the rural southeast.\textsuperscript{4}

In addition to lack of access to healthy food, lack of income to afford healthy food that is available also contributes to obesity and poor nutrition in impoverished neighborhoods. As a general rule, healthy foods, such as fresh produce, lean meats, and whole-grain bread, are more expensive than high-calorie, low-nutrient foods such as potato chips, hot dogs, and sugary cereals. Unhealthy food generally contains more calories at a lower cost, making it a cost-effective choice in the short term.\textsuperscript{5} For families with low incomes and limited food budgets, high-calorie snacks and fast food can seem like the only option.

\textit{Poverty and Stress}
While environmental factors in poor neighborhoods certainly play a role in negative health outcomes, the mere existence of poverty in one’s neighborhood can adversely affect health even when controlling for income and behavioral factors.\textsuperscript{6} Researchers have found that the stress associated with poverty may itself be a cause of adverse health outcomes among the poor. According to Helen Epstein, repeated exposure to stress related hormones “impairs the immune system and damages the brain and other organs.”\textsuperscript{7} Furthermore, chronic stress can cause fat to accumulate around the waistline, contributing to obesity and its associated health problems of diabetes, high blood pressure, and stroke.

\textbf{Related Topics}
- Race and Ethnicity
- Housing
- Education
- Employment Status
- Environment
- Social Environment and Civic Engagement
- Access to Health Services
- Immunizations and Infectious Diseases


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- Cancer
- Chronic Diseases – including Diabetes, Heart Disease and Stroke, and Respiratory Diseases
- Healthy Living and Disease Prevention – including Wellness and Lifestyle; Exercise, Nutrition and Weight; and Prevention and Safety
- Maternal, Infant and Child Health – including Maternal, Fetal and Infant Health and Family Planning
- Behavioral Health – including Mental Health and Mental Disorders and Substance Abuse

Summary of Key Data Findings
- Rates of public assistance and/or food stamps are relatively low in the County, 0.5% and 3%, respectively. These rates range from highs of 0.8% and 4% in Silver Spring area to lows of 0.2% and 1% in the Bethesda area. Non-Hispanic white households are less likely and non-Hispanic Black households more likely to receive either type of assistance. Hispanic households are not more likely to receive public assistance but are more likely to receive food stamps, possibly reflecting this group’s younger age distribution.

The median household income in the County is approximately $93,100. However, there is a wide range in income across County areas as well as across demographic groups. Median income ranges from highs of $124,600 in the Bethesda area and $123,900 in Up-County.
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area to lows of $71,800 in Silver Spring area and $72,700 in the Takoma Park area. Thus, median household income in Silver Spring area is less than 58% of that in the Bethesda area. This wide difference is not explained by levels of unemployment (see Employment, below). Even when considering full-time workers only, the median income in Silver Spring area is only 54% of that in the Bethesda area.

- **Per capita income** for the County was $46,122 according to the 2005-2009 ACS. The Bethesda area’s per capita income is the highest in the County at $75,888, while both the Silver Spring ($33,649) and Gaithersburg ($33,330) areas share the lowest per capita income in the County. When further examined by geography and race/ethnicity, disparities are apparent across all other racial and ethnic groups. The non-Hispanic White per capita income is disproportionately higher than all other racial/ethnic groups. The highest significant disparities are with Hispanics. The Non-Hispanic White per capita income is 3.0 times higher than that of Hispanics in Takoma Park area, 2.6 times in the Silver Spring area, and 2.5 times higher in the Rockville area.

- **The self sufficiency standard for a family of three** in Montgomery County doubled from $32,016 in 1994 to $68,086 in 2008. In the same year, the federal poverty level for a family of three was $17,600 and the annual full-time salary for a minimum wage job was $12,792.8,9

- Despite the County’s overall prosperity, about 5% of residents live **below the federal poverty level**. The rate is almost double in the Silver Spring and Takoma Park areas at 9%. The Up-County area has the lowest poverty rate at about 2%; the Bethesda area rate is about 4%.

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Of particular concern is the high rate of child poverty seen in the Silver Spring area where 12% of children live in poverty. A similar pattern is seen when we consider the “near poor,” that is, individuals with incomes less than twice the federal poverty level.

A somewhat different story emerges when we look at poverty by both geographic area and race/ethnicity. Hispanics of any race are more than twice as likely to be living in poverty as other residents, with only somewhat greater concentrations in the higher poverty areas of Silver Spring and Takoma Park. Poverty among Hispanics in the relatively affluent Bethesda area is much lower. In contrast, non-Hispanic Blacks in the Bethesda area are nearly 2.5 times as likely as all County non-Hispanic Blacks to be living in poverty and over 4.0 times as likely as all County residents of any race/ethnicity. The Up-County area is also relatively well-off and shows a lower prevalence of poverty for each racial-ethnic group compared with the race-ethnicity-specific all-County rates.

Community Perspectives
- Income, employment, and poverty were important determinants of health and quality of life, according to participants.
- Fewer available jobs, reduced employment opportunities, and cuts to employment training affected many participants, particularly immigrant groups.
- Socioeconomic status impacted access to health insurance, access to healthy foods, and affordable housing.
- Many participating individuals and groups reported income under the national poverty level.
- Some participants referenced the fear and anxiety engendered by their financial insecurity.
- For those of lower socio-economic status, access to job training, classes in English competency, and employment were primary priorities.
- Some participants in immigrant groups referenced employee abuses, such as not being paid on time or for overtime, as well as the absence of benefits.

Key Definitions
- Per capita income, or income per person, is the total income of the region divided by the population. It is an aggregate measure of all sources of income and therefore is not a measure of income distribution or wealth. Areas with higher per capita incomes are considered to be more prosperous; however, median income is a more accepted measure of the economic well-being of a region because median income is not skewed by extremely high or low outliers.
- Household income is the total income earned by all household members who are age 16 or older.
- Median income is the income level at which half of households earn more and half of households earn less.
- The federal poverty level is based on the poverty guidelines published annually by the federal Department of Health and Human Services. The federal poverty level is defined by income and household size. For example, the federal poverty level for a family of four in...
2011 is $22,350\textsuperscript{10}. People with household incomes below the poverty level are often referred to as “poor;” people with household incomes below twice the poverty level are often referred to as “near poor.”

- The self-sufficiency standard wage specifies the amount of income that meets a family's most basic needs without public or private assistance, and explains that many families cannot achieve self-sufficiency immediately. The self-sufficiency standard is calculated by adding expenses and taxes and subtracting tax credits. It is based on the cost of each of seven basic needs, determined independently, which allows each cost to increase at its own rate (i.e. housing, child care, food, transportation, health care, taxes, and miscellaneous). It is a better indicator than the federal poverty measure because for most families, in most places, it is simply not high enough to reflect low-income realities.

**Data Sources Used**

**Data Gaps Identified**
- Current analysis provided for the self-sufficiency standard does not include estimates by race, ethnicity for head of household, sub-geographies of the County (PUMA or census tract).
- Data are needed to better capture homeless population in Montgomery County and characterize homelessness by socio-demographics and geography.

## Race and Ethnicity

**Race/Ethnicity and Health Status**

Poor urban Blacks have the worst health outcomes of all groups in the United States.\textsuperscript{11} Nationally, non-Hispanic Black and African Americans have higher mortality rates than Whites for eight out of ten of the leading causes of death, including heart disease, cancer, stroke and respiratory diseases.\textsuperscript{12} In addition, Blacks have the highest rates of obesity in the nation. In

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twenty-five states, the obesity rate for Blacks is greater than 35 percent. By comparison, only one U.S. state has an obesity rate of greater than 35 percent among Whites.  

Although the Black and African American population experience the worst health outcomes in almost every measurable indicator, most other minority groups in the U.S. also demonstrate negative health outcomes compared to Whites. Hispanic Americans tend to have higher rates of obesity and diabetes than the general population. 

*Racial/Ethnicity and Stress*

In most cases, racial minorities are not genetically more susceptible to the diseases from which they suffer disproportionately. This indicates that social and environmental factors play a significant role. More than one hundred scientific studies have found a connection between discrimination and racism and deteriorating physical health. Research suggests that the stress of facing discrimination as a minority can adversely affect health. Racial housing segregation and institutional discrimination are thought to be major causes of such stress.

**Related Topics**

- Poverty
- Housing
- Education
- Employment Status
- Environment
- Social Environment and Civic Engagement
- Access to Health Services
- Immunizations and Infectious Diseases
- Cancer
- Chronic Diseases – including Diabetes, Heart Disease and Stroke, and Respiratory Diseases
- Healthy Living and Disease Prevention – including Wellness and Lifestyle; Exercise, Nutrition and Weight; and Prevention and Safety
- Maternal, Infant and Child Health – including Maternal, Fetal and Infant Health and Family Planning
- Behavioral Health – including Mental Health and Mental Disorders and Substance Abuse

Summary of Key Data Findings

Montgomery County 2010 Population By Race and Ethnicity

- **Racial and ethnic composition**
  - According to the 2010 Census, there were 971,177 Montgomery County residents; 49% were non-Hispanic White, with the remaining 51% comprising a “majority minority” population in Montgomery County—17% were Hispanic, 17% were non-Hispanic Black, 14% were non-Hispanic Asians, and 3% were non-Hispanic two or more race residents.

- According to the 2006-2008 ACS, which enables community-level analysis, non-Hispanic Whites represented a majority of the population in five of the seven areas, with the largest concentrations in the Bethesda and Up-County areas.

- White Oak and Takoma Park areas are more mixed. In these areas, Whites represent the largest share of the population, but no group has a majority. And it is here that the largest concentrations of non-Hispanic Blacks are found. Asian/Pacific Islanders and Hispanics are smaller minority groups with the highest population concentrations found in the Rockville area for the former and Silver Spring and Takoma Park areas for the latter.

The maps below show the distribution of the racial/ethnic populations throughout Montgomery County, based on ACS data from 2005-2009.
Community Perspectives

- Latino/Hispanic, Vietnamese, and Mandarin Chinese community conversation participants described limitations imposed by immigration status and language barriers, as well as economics, in accessing health care.
- Reference was made to employers not providing benefits, particularly among immigrant groups, and to use of emergency care for routine health care.
- For those of lower socio-economic status, access to job training, classes in English competency, and employment were primary priorities. Some participants in immigrant groups referenced employee abuses, such as not being paid on time or for overtime, as well as the absence of benefits.
- Immigrant groups viewed English proficiency as important in reducing social isolation and obtaining access to education, employment, and citizenship.
- Latino/Hispanic groups felt that information about protocols and procedures in the medical system (requirements, clinic hours, health information, Latino doctors, available physical activities, etc.) needed to be available in Spanish.
- Older members of the Mandarin Chinese population perceived that Chinese translation and interpretation were not as readily available as Spanish translation, which limited their knowledge of information about health care and community issues.
- As expressed by members of the Vietnamese community, access to mental health care and the need for bilingual mental health providers ranked high on their list, as well as concerns around multi-generational relationships due to acculturation of the younger generation.
- Some participants in the Latino day laborers group reported poor housing conditions and rent discrimination, and having to sacrifice privacy because they had to share dwelling space due to the lack of affordable housing in their communities.

Key Definitions

- The racial and ethnic categories used to describe the population are non-Hispanic white, non-Hispanic Black, Hispanic (of any race), Asian or Pacific Islander, and other or mixed race.

Data Source


Housing

Housing and Health Outcomes

It is often possible to predict health outcomes based on the neighborhood or district in which a person lives.\textsuperscript{19} This is because many indicators of health are influenced by housing problems

that are common to certain neighborhoods, such as exposure to toxic chemicals, infestations of mold and pests, poor indoor air quality, and shoddy home construction. These housing problems can lead to negative health outcomes for people who are exposed to them. For example, consequences of exposure to toxic chemicals, such as lead, include damage to the nervous system, kidneys and blood cells, and impaired mental and physical development.\(^\text{20}\) Exposure to mold can cause allergic reactions, asthma attacks, and infections in people with weak immune systems.\(^\text{21}\) Infestations of pests and insects can transmit diseases such as hepatitis A, scabies and typhus. Overcrowded housing can exacerbate poor hygiene and increase risk of contracting diseases such as tuberculosis, influenza and meningitis.\(^\text{22}\) Shoddy home construction can lead to household accidents and injuries, which occur frequently in substandard and overcrowded housing, according to the World Health Organization.\(^\text{23}\)

These issues typically affect entire low-income neighborhoods while leaving other, higher income neighborhoods unaffected. According to the California Newsreel and Vital Pictures documentary, *Unnatural Causes*, the most severe housing issues tend to occur in clusters with low-income neighborhoods experiencing extremely high rates of asthma and other diseases related to housing issues.\(^\text{24}\)

*Neighborhood, Crime, and Stress*

Another housing issue that affects health is crime in the neighborhood surrounding a person’s home. High crime rates in a neighborhood not only increase the chances that someone living in that neighborhood will be personally touched by crime, they also contribute to numerous other negative health outcomes. High crime in a neighborhood can decrease access to healthy food options because residents may be afraid to venture outside of familiar territory to grocery stores, even if such options are available. In addition, high rates of crime in a neighborhood decrease the likelihood that residents will get regular exercise. According to a study in the *Quantitative Journal of Criminology*, people who report feeling very afraid of crime are more likely to report having poor health, even when controlling for other factors such as income, health: Report of the WHO Commission on Health and Environment. Retrieved on March 1, 2011, from

http://www.epa.gov/iaq/lead.html#Lead%20Health%20Effects.


Related Topics

- Race/Ethnicity
- Poverty
- Education
- Employment Status
- Environment
- Social Environment and Civic Engagement
- Access to Health Services
- Immunizations and Infectious Diseases
- Cancer
- Chronic Diseases – including Diabetes, Heart Disease and Stroke, and Respiratory Diseases
- Healthy Living and Disease Prevention – including Wellness and Lifestyle; Exercise, Nutrition and Weight; and Prevention and Safety
- Maternal, Infant and Child Health – including Maternal, Fetal and Infant Health and Family Planning
- Behavioral Health – including Mental Health and Mental Disorders and Substance Abuse

Summary of Key Data Findings

- Homeowner vacancy rate was 1.3% in 2005-2009.

- Violence negatively impacts communities by reducing productivity, decreasing property values, and disrupting social services. For the past four years for which there are data, the violent crime rate in Montgomery County dropped from 247.7 per 100,000 population in 2006 to 224.3 in 2009.\(^{26}\)

- The federal poverty level described above does not take into account differences in the cost of living across the country. A good indicator of how strained a household’s budget might be is the portion of household income spent on housing. More than 30% is generally

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accepted as representing a serious burden for the household. Across the County, about 26% of all households spent more than 30% of their incomes on housing in 2006-2008. Homeowners fare much better than renters with nearly 20% of the former but 40% of the latter spending an excessive share of income on housing. This pattern holds across all seven County areas.

- Hispanics are most likely to spend a high proportion of their household income on housing. Approximately 50% of Hispanic owners and renters spend more than 30% of household income on housing. In the Up-County and Silver Spring areas, the share of Hispanic households spending more than 30% of their income on housing exceeds one-half. In the Silver Spring area, nearly two-thirds of Hispanics who rent spend more than 30% of their income on housing.

- About one-third of non-Hispanic Black households and slightly fewer Asian/Pacific Islander households are also severely burdened by housing costs, with renters more often burdened than owners. Non-Hispanic Black households in the Rockville area are most likely to spend more than 30% of their income on housing, while for Asian/Pacific Islander households spend a higher portion of their income in the Silver Spring, White Oak, and Takoma Park areas.

- Non-Hispanic white homeowners are least likely (14%) to spend 30% or more on housing. For this group, the difference between owners and renters is the greatest. High spending on necessities, such as housing, leaves less disposable income for meeting other household needs, including health care.

**Community Perspectives**

- A frequent theme from the Community Conversations was the need for affordable housing in the County for those of low/moderate income and for seniors.

- Residents of Takoma Park and Long Branch reported increasing rental costs and decreased housing affordability.

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- Some Latino day-laborers reported poor housing conditions, rent discrimination, and having to sacrifice privacy because they had to share dwelling space due to the lack of affordable housing in their communities.
- Representatives of the Bethesda area felt the County was currently not a good place to live and age as a senior because of the lack of affordable, specialized housing for seniors and inadequate public transportation.
- Overall, housing in the County was viewed as expensive.

Key Definitions
- The homeowner vacancy rate is the proportion of property that is vacant “for sale.” It is computed by dividing the number of vacant units “for sale only” by the sum of the owner-occupied units, vacant units that are “for sale only,” and vacant units that have been sold but not yet occupied. Vacancy status is often used as a basic indicator of the housing market. It is used to identify turnover and assess the demand for housing. It provides information on the stability and quality of housing for a particular geographic region.
- The Violent crime rate is the number of murders, rapes, robberies, aggravated assaults, breaking and entering events, larceny thefts, and motor vehicle thefts per 100,000 population.26

Data Sources Used
- American Community Survey, U.S. Census Bureau, Public Use Microdata, 2006-2008

Data Gaps Identified
- Socio-demographic and sub-geographic characteristics were not available on the violent crime data provided by the Maryland Governor’s Office on Crime Control and Prevention.

Education

*Education and Health Habits*
In general, people with higher levels of education tend to be healthier.28 The impact of education on health can be substantial. For example, a National Bureau of Economic Research study found that four additional years of education is associated with a 7% decrease in risk of heart attack and an 18% decrease in the risk of diabetes. While these effects can be partially explained by the fact that higher education is associated with higher income, increased levels of

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family support, and increased access to health care, the study found significant effects of education on health, even when controlling for such factors.\textsuperscript{29}

One major way in which education influences health is by developing health literacy, which is the ability to understand and interpret health information and the ability to use health information to make healthy choices.\textsuperscript{30} Housing is also related to education because neighborhoods with substandard housing tend to contain inferior schools as well.\textsuperscript{31}

**Related Topics**
- Race/Ethnicity
- Poverty
- Housing
- Employment Status
- Environment
- Social Environment and Civic Engagement
- Access to Health Services
- Immunizations and Infectious Diseases
- Cancer
- Chronic Diseases – including Diabetes, Heart Disease and Stroke, and Respiratory Diseases
- Healthy Living and Disease Prevention – including Wellness and Lifestyle; Exercise, Nutrition and Weight; and Prevention and Safety
- Maternal, Infant and Child Health – including Maternal, Fetal and Infant Health and Family Planning
- Behavioral Health – including Mental Health and Mental Disorders and Substance Abuse

**Summary of Key Data Findings**
- **Educational attainment** in the County is high relative to the Maryland average, both for the share of the population with at least a high school education and the share with at least a bachelor’s degree. With the exception of Hispanics, all groups in the County in almost all of the geographic areas have higher average educational attainment than the State average.

- In contrast, the educational achievement of Hispanics is lower than the State average in almost all geographic areas. Again, the fact that a higher share of this population that is foreign-born and recently immigrated may explain some of this difference.


The highest rates of educational achievement are found in the Bethesda and Up-County areas; the lowest are in the Silver Spring and Takoma Park areas.

The greatest variability across geographic areas was among Asian/Pacific Islanders. In the Up-County area, 96% of Asian/Pacific Islanders has at least a high school education. In the Takoma Park area, only 74% does. Similarly, the proportion of this population with at least a bachelor’s degree ranges from a high of 80% in the Bethesda area to a low of 44% in the Silver Spring area.

Proficiency in math and reading in grades 4 and 8 vary by race for Montgomery County students, comparable to patterns seen at the State level. White, Asian, and multi-racial fourth grade students achieved higher proficiency in reading and math in 2011 (over 95%) while American Indian/Alaska Native (math: 82%, reading: 75%), Black/African American (math: 83%, reading 84%), and Hispanic (math 85%, reading: 87%) students achieved lower math and reading proficiency levels than their peers. In eighth grade, reading levels were also highest among White (over 95%), Asian (95%), and multi-racial students (94%) while American Indian/Alaska Native (87%), Black/African American (82%), and Hispanic (80%) students showed lower achievement levels. Math levels for eighth graders were highest among Asian (91%) students, followed by White (89%) students. There is a 10- to 30-percentage point gap in math proficiency scores between Asian and White students and multi-racial (81%), American Indian/Alaska Native (60%), Black/African American (59%), and Hispanic (58%) students. All of these minority population groups show a marked fall-off in math proficiency from fourth grade to eighth grade, which means these students are poorly prepared for high school math.
• Math and reading proficiency levels in both fourth and eighth grades show a closing the gap between male and female students from 2003 to 2011, with no gender differences in eighth grade math in 2011, and small differences in eighth grade reading, fourth grade reading, and fourth grade math proficiency levels.

Community Perspectives
• Some groups recommended changes in the current educational system to achieve greater consistency in quality across the County, smaller class size, better early childhood programs, and more after-school programs.
• A frequent suggestion across groups was the need for more physical education classes/activities and more health education in schools.
• Some young people recommended strengthening sex education programming in schools.
• Some participants reported their perceptions about the negative effect of student placement by ability and others expressed concern about the number of school dropouts.
• Insufficient emphasis on and quality of physical education in the schools came up frequently. Youth reported that physical education was optional past the first year and did not inspire participation or further exercise.
• Adults, including seniors, expressed concern over the inadequacy of physical education for young people and the effects this might have on obesity and future risk of chronic disease.
Key Definitions

- People who have either completed high school or passed the General Education Development (GED) test are included as having at least a high school degree.
- 4th and 8th Grade Proficiency is based upon the number of students who score proficient or advanced in Maryland School Assessment (MSA). Maryland MSA standards are divided into three levels of achievement: advanced is a highly challenging and exemplary level of achievement indicating outstanding accomplishment in meeting the needs of students; proficient is a realistic and rigorous level of achievement indicating proficiency in meeting the needs of students; and basic is a level of achievement indicating that more work is needed to attain proficiency in meeting the needs of students.

Data Sources Used

- American Community Survey, U.S. Census Bureau, Public Use Microdata, 2006-2008

Data Gaps Identified

- Math and reading proficiency data among 4th and 8th grade students are not available to the sub-geography level within Montgomery County.

Employment Status

The unemployment rate is a key indicator of the local economy. Unemployment occurs when local businesses are not able to supply enough and/or appropriate jobs for local employees and/or when the labor force is not able to supply appropriate skills to employers. A high rate of unemployment has personal and societal effects. During periods of unemployment, individuals are likely to feel severe economic strain and mental stress. Unemployment is also related to access to health care, as many individuals receive health insurance through their employer. A high unemployment rate places strain on financial support systems, as unemployed persons qualify for unemployment benefits and food stamp programs.

Related Topics

- Education

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• Race/Ethnicity
• Poverty
• Housing
• Environment
• Social Environment and Civic Engagement
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• Chronic Diseases – including Diabetes, Heart Disease and Stroke, and Respiratory Diseases
• Healthy Living and Disease Prevention – including Wellness and Lifestyle; Exercise, Nutrition and Weight; and Prevention and Safety
• Maternal, Infant and Child Health – including Maternal, Fetal and Infant Health and Family Planning
• Behavioral Health – including Mental Health and Mental Disorders and Substance Abuse

Summary of Key Data Findings
• More than 50% of working-age adults in the County are employed in the private sector and about 17% in the public section with some variation across the County areas. About 19% of the working-age population is not in the labor market.

• Non-workers are less common in the Takoma Park, Gaithersburg, and Silver Spring areas. Higher labor force participation may be related to the lower household income in these areas, necessitating employment of as many adult household members as possible. Adults not in the labor force may be students or stay-at-home parents, choices that might not be open to lower-income households.

• Unemployment in the pre-recession period represented in the data was relatively low at about 4% of the County population. Males were more likely to be unemployed (4%) than females (3%) in the County as a whole and in all County areas except the Silver Spring area,
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where both male and female unemployment is higher than in the County overall, and
female unemployment is higher than that for males.

• Unemployment is highest among non-Hispanic Blacks and lowest among non-Hispanic
whites and Asian/Pacific Islanders, with little variance across County areas with the
exception of a notably high rate among non-Hispanic Blacks in the Silver Spring area.

Key Definitions
• The unemployment rate represents the number unemployed as a percent of the labor
force.35
• Unemployed – All civilians 16 years old and over are classified as unemployed if they (1)
were neither “at work” nor “with a job but not at work” during the reference week, and (2)
were actively looking for work during the last four weeks, and (3) were available to start a
job. Also included as unemployed are civilians who did not work at all during the reference
week, were waiting to be called back to a job from which they had been laid off, and were
available for work except for temporary illness. Examples of job seeking activities are:
registering at a public or private employment office; meeting with prospective employers;
investigating possibilities for starting a professional practice or opening a business; placing
or answering advertisements; writing letters of application; or being on a union or
professional register. People who are classified as “not in the labor market” are not working
and not looking for work.35

Data Sources Used

Environment
As Healthy People 202036 points out, we interact with the environment constantly. These
interactions affect quality of life, years of healthy life lived, and health disparities. The World
Health Organization (WHO) defines environment, as it relates to health, as “all the physical,
chemical, and biological factors external to a person, and all the related behaviors.”37
Environmental health consists of preventing or controlling disease, injury, and disability related
to the interactions between people and their environment.

37 World Health Organization (WHO). Preventing disease through healthy environments. Geneva, Switzerland:
WHO; 2006. Retrieved on August 16, 2011 from
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Quantitative Needs Assessment: SOCIAL DETERMINANTS OF HEALTH SECTION

The National Capitol Region has received a failing letter grade of F on air quality,\(^{38}\) according to the American Lung Association index that bases its grades on the annual number of days that ozone levels exceed U.S. standards. Thus, air quality clearly remains a challenge for respiratory health in Montgomery County and contributes to the asthma prevalence in our population as well as other chronic and disabling conditions (lung disease (including asthma, chronic bronchitis, emphysema), cardiovascular disease, and diabetes). According to the 2009 Maryland Behavioral Risk Factor Surveillance System, almost 17% of children, ages 2-18 years, have been diagnosed with asthma. Hispanic/Latino children have a higher asthma prevalence (14% in 2006-2008) compared to other racial/ethnic groups.

### Related Topics
- Education
- Race/Ethnicity
- Poverty
- Housing
- Employment Status
- Social Environment and Civic Engagement
- Access to Health Services
- Immunizations and Infectious Diseases
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- Chronic Diseases – including Diabetes, Heart Disease and Stroke, and Respiratory Diseases
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- Maternal, Infant and Child Health – including Maternal, Fetal and Infant Health and Family Planning
- Behavioral Health – including Mental Health and Mental Disorders and Substance Abuse

### Summary of Key Data Findings
- **Annual ozone** air quality has received a composite score that amounts to a letter grade of F for the past four years.

- **Annual particle pollution** composite score has improved since 2003-2005 when Montgomery County received a letter grade of C to a letter grade of B for 2006-2009.

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Key Definitions

- To develop composite scores, weighting factors were assigned to each category of the Air Quality Index (ozone and particle pollution). The number of orange days experienced by each County received a factor of 1; red days, a factor of 1.5; purple days, a factor of 2; and maroon days, a factor of 2.5. This allowed days where the air pollution levels were higher to receive greater weight. Next, multiplied the total number of days within each category by their assigned factor, and then summed all the categories to calculate a total. Finally, divided the total by three to determine the weighted average, since the monitoring data were collected over a three-year period. The weighted average determined each County’s grades for ozone and particle pollution. All counties with a weighted average of zero (corresponding to no exceedances of the standard over the three-year period) were given a grade of “A.” For ozone, an “F” grade was set to generally correlate with the number of unhealthy air days that would place a County in nonattainment for the ozone standard.
- For short-term particle pollution, fewer unhealthy air days are required for an F than for nonattainment under the PM2.5 standard. The national air quality standard is set to allow 2 percent of the days during the 3 years to exceed 35 µg/m³ (called a “98th percentile” form) before violating the standard. That would be roughly 21 unhealthy days in 3 years. The grading used in this report would allow only about 1 percent of the days to be over 35 µg/m³ (called a “99th percentile” form) of the PM2.5. The American Lung Association supports using the tighter limits in a 99th percentile form as a more appropriate standard that is intended to protect the public from short-term spikes in pollution.

Data Sources Used


Data Gaps Identified

- Data are not available below the County level to compare local areas within Montgomery County.

Social Environment

Related Topics

- Education
- Race/Ethnicity
- Poverty
Summary of Key Data Findings

- The number of persons per square mile in Montgomery County increased from 1760.8 in 2000 to 1961.1 in 2010. According to the 2005-2009 ACS, the most densely populated areas of the County are along the I-270 corridor from Germantown down to Rockville and the area to the south and east of Rockville (Silver Spring, Bethesda, Takoma Park, and East County areas) to the borders with the District of Columbia and Prince Georges County.
• **Child abuse rates** in Montgomery County were 1.8 cases per 1,000 children less than 18 years of age in 2008, unchanged from the levels observed in 2005.
- About 8% of Montgomery County residents are **children under the age of five**, a figure that is fairly constant across the areas. About 16% of residents are **school-age children** between the ages of 6 and 17 with somewhat higher numbers in the Up-County area and somewhat lower numbers in the Takoma Park area. The **working age population**, ages 18 to 64, spans the greatest number of years and so is the largest group in the population, at 64% of residents. **Older adults** represent 12% of the population overall, ranging from a low of 5% in the Gaithersburg area to a high of 17% in the Bethesda and Silver Spring areas.

### Montgomery County Population Distribution by Race and Age Groups, 2010

<table>
<thead>
<tr>
<th>Age Group</th>
<th>White (Non-Hispanic)</th>
<th>Hispanic (Any Race)</th>
<th>Black/AA</th>
<th>Asian</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-4 Yrs</td>
<td>8,395</td>
<td>15,651</td>
<td>21,964</td>
<td>135,451</td>
</tr>
<tr>
<td>5-17 Yrs</td>
<td>23,476</td>
<td>165,398</td>
<td>151,852</td>
<td>151,852</td>
</tr>
<tr>
<td>18-64 Yrs</td>
<td>299,267</td>
<td>108,115</td>
<td>93,345</td>
<td>93,345</td>
</tr>
<tr>
<td>65+ Yrs</td>
<td>82,712</td>
<td>7,934</td>
<td>13,350</td>
<td>14,296</td>
</tr>
</tbody>
</table>

- Differences in **age distribution** across racial and ethnic groups can be an indicator of differences in fertility and life expectancy of the each of groups. As is true across the US, a larger share of women than men are age 65 or older, reflecting the generally higher life expectancy of women in the US.

- The County’s Black/African American population has a higher share of its population in the working ages and a lower share in the oldest group, which may reflect the lower life expectancy of this population group. Hispanics have a lower share at older ages as well, but also have a higher share of children. This pattern could reflect life expectancy differences.
but could also reflect the larger share of new immigrants in this population, a group that is often younger. In contrast, the White population of the County is disproportionately older.

- According to the 2010 Census, 12.3% of the 971,177 residents were adults 65 years and older (119,769: 50,464 male, 69,305 female). By far, the highest proportion of adults, 65 years and older, was Whites (17.3%), followed by Asians (10.6%), Black/African Americans (8.8%), and Hispanics (4.8%) of any race.

- According to the 2005-2009 American Community Survey, 25.5% of adults 65 years and older reported that they live alone, putting them at risk for social isolation, limited access to support, or inadequate assistance in emergency situations.

- Married families benefit from the time and often the income of two parents and so are often more conducive to promoting the health of all family members, but especially of children. Fifty-four percent of households in the County are married families and 13% are single parent families. There are distinct patterns across racial and ethnic groups in household composition. Married families are most common among Asian/Pacific Islanders and least common among non-Hispanic Blacks. Single-parent families are more common among non-Hispanic Blacks and Hispanics and less common among non-Hispanic Whites and Asian/Pacific Islanders. The presence of an older adult is most common in White households.

- Married families were most prevalent in the Up-County area and least in the Takoma Park area. The share of households represented by single-parent families also ranges broadly but is most common in the Gaithersburg and White Oak areas and least common in the Bethesda area. Nearly one quarter (23%) of County households have at least one older adult member (age 65 or older), an age group that is more likely to experience health and disability challenges. Again, the proportion ranges widely across the areas with higher proportions in the Silver Spring and Bethesda areas, and a lower proportion in the Gaithersburg area.

Community Perspectives
- Residents expressed frustration with the lack of walk-able and bike-able neighborhoods and communities. Other than the bike trails through parks, walking and biking were generally viewed as unsafe and not practical as a means of everyday transportation.

- Up-County residents were particularly concerned with traffic safety related to the increased urban/suburban sprawl.

- In addition, youth expressed concerns about violence and bullying in community schools. At the same time, while they viewed informal gangs, bullying, and fighting as problems, youth also reported they generally felt safe in their school and neighborhood.
Some participants in immigrant groups reported not feeling secure because their immigration status could preclude reporting crimes to police (e.g., providing proof of residence).

There were recommendations regarding the need for effective police/community interaction and accountability, better lighting, and gun control.

Residents of the Germantown/Up-County area described the rapid, uncontrolled growth of their part of the County, describing how they viewed it had an adverse effect on health and safety in numerous ways. One aspect of this was that it deterioration from the sense of community identity and cohesion.

In the Bethesda area, residents discussed an absence of community identity in their area. They hypothesized that the lack of a community center (facility) of some sort, which exists in other parts of the County, may be a contributor.

While there were three Community Conversations with senior groups, priorities related to aging and senior services came up across groups. In particular, concerns were expressed about affordable/accessible transportation, readily available information about services, education about nutrition and exercise programs, and increased options and resources for aging in place, including affordable housing, home care, and other services. Suggestions included provision of volunteers within communities, fostering communities where neighbors looked out for each other, and expansion of the village concept that has already been instituted in a number of communities.

Representatives of the Bethesda area felt the County was currently not a good place to live and age as a senior because of the lack of affordable, specialized housing for seniors and the inadequate public transportation.

Key Definitions
- **Population density**: within a defined geographic area, the number of persons residing in the area divided by the number of square miles in the same area, which equals the number of persons per square mile.
- **Child Abuse Rates**: Indicated cases reflect a finding that there is credible evidence, which has not been satisfactorily refuted, that abuse did occur. Rates are based on <18 population estimates from the US Census.

Data Sources Used
- Maryland Governor's Office for Children; Maryland Department of Human Resources. Indicated and Unsubstantiated Child Abuse Cases Per 1,000 Children Under 18 Years, 2004-2008.
- American Community Survey, U.S. Census Bureau, Public Use Microdata, 2006-2008
- 2010 Census Summary File 1, Maryland State Data Center, August 12, 2011 Release.