

2018 Charles County Community Health Needs Assessment Report



UNIVERSITY *of* MARYLAND
CHARLES REGIONAL MEDICAL CENTER

**Commissioned by the
University of Maryland Charles Regional Medical Center**

Table of Contents:

Executive Summary	3
Focus Groups	6
Key Informant Interviews	12
Long Survey Results	17
Short Survey Results	31
Geographic and Demographic Profile	37
Vital Statistics	46
Heart Disease, Stroke, and Hypertension	53
Cancer	59
Diabetes mellitus	77
Asthma	82
Aging Population	86
Injuries	91
Obesity and Overweight	98
Communicable Disease and Environmental Health	104
HIV/AIDS/Sexually Transmitted Infections	109
Smoking and Tobacco Use	120
Substance Use Disorders	133
Dental Health	157
Mental Health	163
Access to Care	173
Conclusions	206

Charles County Health Needs Assessment Executive Summary

From July 2017 to March 2018, the University of Maryland Charles Regional Medical Center undertook a comprehensive assessment of the health needs of Charles County, Maryland.

To provide a comprehensive assessment of the health needs of the county, a five method plan was developed which included 5 different sources of data: a long online survey of Charles County residents perceptions of health and health behaviors, a short paper survey on health perceptions throughout the county, 5 focus groups with community leaders, citizens, and stakeholders, 9 key informant interviews on behavioral health, and a quantitative data analysis of secondary, published data. Data collection occurred between July 2017 and February 2018.

The use of the multiple data collection methods strengthened the validity of the assessment's findings as well as ensuring that Charles County residents had an opportunity to participate in the assessment process and to feel invested in its outcome.

Five focus groups were performed throughout the county between July 2017 and February 2018. The focus group topics included: chronic disease specific health, county leadership, youth through the school nurses, reproductive and infant health, and access to care. Approximately 128 people participated in the county focus groups.

The biggest issues to emerge from the focus groups included:

- Physician recruitment, retention, and reimbursement
- Mental health resources and services
- Substance Use Disorders
- Social Determinants of Health: Transportation, Access to Care
- Chronic Disease Prevention and Management
- Obesity/Overweight: childhood specifically

846 Charles County residents completed the 27 question online survey that was created using Survey Monkey. The link to the survey was available on the University of Maryland Charles Regional Medical Center website and the Charles County Department of Health website. The first section of the survey asked participants about their perception of health and health services within the county. The second section asked them about their health behaviors, in order to determine their risk for the development of certain health conditions.

Most of the respondents were from Charles County (77%). The second largest percentage is from St Mary's County (12%). Only 7% reported living outside of Southern Maryland (Charles, Calvert, St Mary's, or PG). Approximately 71% of the respondents were between the ages of 35-64 years. The highest percentage was in the 55-64 year age group (25%). The overwhelming majority of the respondents were

female (80%). Minorities made up 23% of the total 2014 survey population. African Americans comprised 17% of the respondents. Approximately 4% of the survey respondents self identified as Hispanic. This is similar to the county overall Hispanic population of 5%.

The survey participants were a highly educated group with 89.97% reporting having had any amount of college education. Just over half of the group had completed an undergraduate degree or higher (50.42%). Most of the participants were employed and working full-time. The most common response was a household income of \$60,000-\$120,000 per year (39.39%). Individuals with a household income less than \$60,000 made up one-quarter of the 2018 survey.

Nearly all of the survey participants (97.59%) reported having health insurance. The majority of the participants also reported having dental insurance (85.92%) though this percentage is smaller than those reporting health insurance. Many of the respondents also had vision insurance (72.68%). Only 1.56% of the survey population reported having no type of insurance.

The biggest health problems that surfaced from the online survey included: obesity, drug use, tobacco use, affordable housing, and alcohol use.

The protective health behaviors that Charles County residents were displaying included: always wearing a seat belt, washing hands after using bathroom or making food, practicing safe sex, getting a flu shot, refraining from smoking and drinking alcoholic drinks.

Some risk factors that Charles County residents possessed that may lead to chronic disease included: not participating in physical activity each day, not eating enough fruits and vegetables, not performing self exams for cancer, not getting enough sleep at night, not using sunscreen regularly, and not taking a vitamin daily.

The online survey participants were also asked about access to health care. 84.76% have had a routine doctor's visit in the past 12 months. 94.2% receive their routine health care in a physician's office. 70.54% were able to see a doctor when needed. If they were unable to see the doctor when needed, the most common reasons were that there were no available appointments (34.11%) or that it was too expensive and they could not afford it (5.74%).

75.48% travel outside of Charles County for medical care at some point. Only 10% reported that they always travel outside the county for care. The most common medical services that people receive outside of Charles County are specialist doctor appointments (58.61%), primary care doctor appointments (24.44%), hospitalizations (20.11%), and dental appointments (18.53%). The most common responses for traveling outside the county were that the services were not available in Charles County (21.78%) and the quality of care was better elsewhere (39.26%).

A short 4 question survey was distributed throughout the county regarding perceptions of health within the county. A total of 1,317 short surveys were completed. Ongoing survey collection was conducted at the Charles County Department of Health's Nursing, Substance Abuse, and Mental Health clinics; the University of Maryland Charles Regional Medical Center's Urgent Care, Primary Care, and OBGYN clinics

and Cardiac Rehabilitation Program; the Center for Children; Health Partners Inc; the Western County Community Health Center; Lifelong Learning Center; University of Maryland Extension Office; White Plains Primary Care; Charles County Government; Lifestyles of Maryland Inc.; Charles County Department of Aging; and Cambridge Pediatrics. The community was also surveyed at large events such as Mission of Mercy, Charles County Community Resource Day, the Charles County Fair, the Cancer Walk in Indian Head, and the Living Well with Chronic Conditions self management classes.

The biggest health problems identified by the short community survey included: obesity, drug and alcohol use, smoking and tobacco use, diabetes, and cancer.

The short survey also identified factors that prevent people from receiving the health care that they need. The most commonly cited barriers to needed health care was "lack of health insurance" (43%) and care is "too expensive/can't afford it" (57%). Under "Other", several people explained that they do not have dental or vision insurance to cover those needed services, high deductibles/co-pays, services were not covered by their insurance, and language barriers.

Short survey participants were asked if sufficient services are available to address the health conditions in Charles County. Many of the respondents answered that they did not know or they left it blank. This leads us to believe that additional outreach and awareness campaigns are needed to educate people on available services in Charles County.

The greatest number of respondents believes that there are many services available in Charles County in regards to drug use. This was followed closely by services for high blood pressure. The greatest number of respondents believes that there are some services available in Charles County in regards to mental health. This was followed closely by services for drug use. The greatest number of respondents believes that there are no services available in Charles County for dental health.

Quantitative data was analyzed for various health topics including: mortality, population and demographic data, natality, infant mortality, heart disease, stroke, hypertension, access to health care/health uninsured, cancer, asthma, injuries, diabetes, obesity, arthritis, dementia/Alzheimer's disease, communicable disease, environmental health, sexually transmitted diseases, HIV/AIDS, mental health, dental health, substance use, disabilities, and tobacco use.

Cumulative analysis of all quantitative and qualitative data was used to prioritize the top health needs of Charles County. The priorities were chosen by the Partnerships for a Healthier Charles County's Steering Committee and Subcommittee leaders using the Hanlon Method, a National Association of City and County Health Officials' recommended means for health prioritization. The method objectives score health conditions based on the size of the problem, seriousness of the problem, and the effectiveness of available interventions. The health priorities chosen include:

1. Chronic Disease Prevention and Management

- Major Cardiovascular Disease (Heart Disease, Hypertension, and Stroke)

- Obesity and Overweight
- Diabetes Mellitus

2. Behavioral Health

- Substance Use Disorders
- Mental Health

3. Access to Care

The current assessment findings are an update from the 2015 community health needs assessment report and health improvement plan. 56% of the objectives outlined in the Charles County Health Improvement Plan reached their anticipated goals in the given time frame.

Thanks to the work of the Partnerships for a Healthier Charles County and its teams, the Charles County Health Improvement Plan objectives have been met for:

- Mental Health Emergency Department Visit Rate decreased
- Addictions-related Emergency Department Visit Rate decreased
- Preventable Hospital Stay Rate decreased
- Number of County Providers increased
- Colon and Rectal Cancer Mortality Rate decreased

Charles County Health Improvement Plan objectives that were not met include:

- Diabetes Emergency Department Visit Rate increased
- Percentage of Adults at a healthy weight decreased
- Childhood obesity percentage increased
- Hypertension Emergency Department Visit Rate increased

The data from this community health needs assessment was used to develop the next Charles County health improvement plan and subsequent action plans. They provide the county with measurable outcomes and benchmarks for 3 year program implementation.

Focus Groups:

A critical part of the needs assessment process is to invite the community to express their perceptions of health status. Qualitative data cumulated from this process was used in conjunction with the quantitative health data to determine the most important health issues within the county.

Five focus groups were conducted throughout the county from July 2017 to February 2018. Each focus group was designed to target a specific population or health issue. The fifteen focus group topics included:

- Access to Care: Individuals and agencies that serve the medically underserved and the uninsured were invited to participate in this group. Case managers from the hospital and private practices were also invited to the session.
- Disease specific: There are many organizations and programs in Charles County that function to help prevent, treat, and support individuals with chronic disease. They represented the audience for the disease specific meeting.
- The leadership focus group included many leaders from within all parts of the community. Civil servants as well as health leaders were in attendance to discuss their particular view points on the health of the county, its residents, and their employees.
- Reproductive and Infant Health: Agencies representing maternal and child health expressed their opinions and observations on issues of reproductive health and health of an infant.
- The Charles County school nurses provided a unique glimpse at the health issues of the school aged population. Many emerging health and social issues, such as mental health, were discussed at this meeting.

The five focus groups were well attended with approximately 128 attendees participating. Participants represented all service organizations within the community. They provide services to all facets of community including women, infants, school aged children, those who are incarcerated, those with mental health problems, those with financial/housing/employment/health issues, the un- and underinsured, the hungry, those with chronic health conditions, the homeless, the elderly, college students, medically underserved, all faiths and religions, and minorities, just to name a few.

Focus groups followed the same pattern of health-related questioning. The questions included:

Question 1: Describe the Charles County population that you serve or represent.

Question 2: What do you perceive to be the biggest health problems/issues affecting the community?

Question 3: What are the strengths of the community?

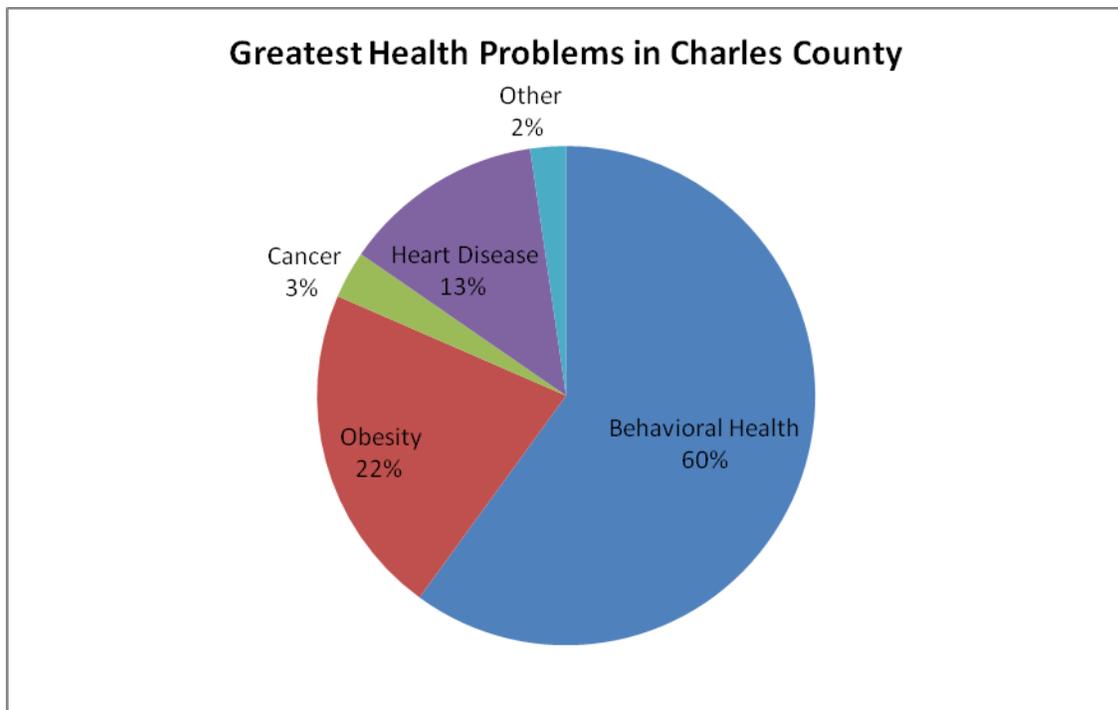
Question 4: What are challenges and problems of the community?

Question 5: What are your suggestions and recommendations to improve health locally?

In addition to the discussion questions, participants were given the opportunity to answer multiple-choice, interactive questions. The answers to those questions lead into the discussion questions.

Interactive Question 1: What do you believe is the greatest health issue affecting Charles County?

Obesity and Behavioral Health were the most commonly reported health conditions for Interactive Question 1. Approximately 60% of the focus group participants felt that behavioral health was the greatest health problem in Charles County. This is an increase from the last needs assessment where only 36% chose behavioral health as the greatest health problem in the county. Obesity was the second most common choice with 22%. The health conditions listed under other were anger issues and lack of parenting.



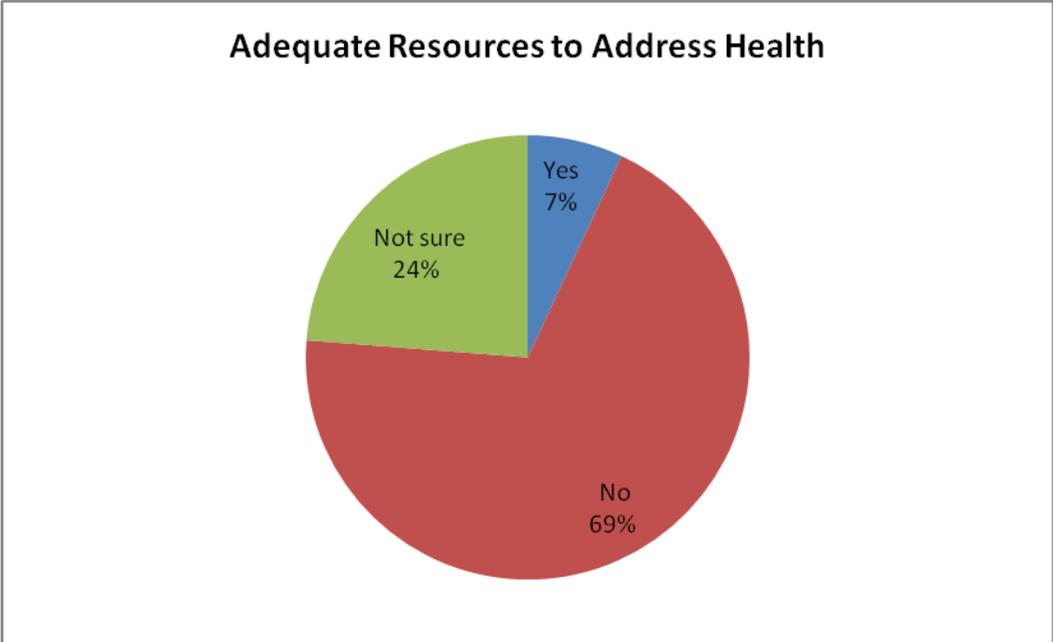
Interactive Question 2: Since the 2015 community health needs assessment, have you seen improves in health in Charles County?

Responses were divided on this question. Almost half of the respondents (47%) felt that there have been improvements in the health of the county since the last needs assessment; whereas, 41% felt that health had stayed the same in the county. This question is very important since the local health improvement coalition has developed and implemented many activities to address the county's health priorities.

Since the 2015 needs assessment, has health improved in Charles County?	Count (#)	Percent (%)
<i>Improved</i>	60	47%
<i>Stayed the same</i>	53	41%
<i>Worse</i>	10	8%
<i>I don't know</i>	6	4%

Interactive Question 3: Are there adequate resources to address health conditions in Charles County?

Two-thirds of the focus group participants felt that there are not adequate resources to address the health problems in Charles County.



In the leadership focus group, this question was changed to an open ended questions, and responses were given in the group discussion. Topics included the lack of funding and resources to address the emerging opioid crisis, mental health services, and the availability of primary care providers and specialists.

Discussion questions:

- 1. What do you perceive to be the health problems/issues of the local community? Are there barriers and gaps in services affecting health?**

Much of the discussion focusing around access to care. Social determinants of health such as transportation, homelessness, low health literacy, and limited education were repeated in all focus groups. Focus group participants also discussed issues surrounding primary care, not just the lack of providers but the lack of engagement/investment in patient's health and well-being among current county providers.

Focus groups always lead to a discussion on the limited number of specialists in Charles County. In particular, the focus groups talked about the lack of mental health providers. It was repeated that there are not enough psychiatrists in the county. It is difficult to find mental health services for children.

2. What are the strengths of the community?

Charles County is known for its ability to collaborate. Agencies communicate well and are willing to move outside of their silos to work together to address issues. All partners are "at the table." The county hospital is partnering with other hospitals to address common issues that span beyond the county lines. The people involved in the health projects have the drive to continue to improve the county.

There are many new educational programs in the county to address chronic conditions. The county now offers outpatient diabetes education, chronic disease self management classes, mobile integrated healthcare, and a diabetes prevention program. There is also work to move outside of traditional settings to address chronic conditions such as encouraging blood pressure screenings in dental practices.

3. What key changes could the community implement to improve health locally?

Communication was the theme to come out of this discussion. The county physicians and providers need to work on communication with their patients, with the hospital, and with community services and programming. Communication to county residents on available services and how to access them was repeated in each group.

Funding is always a barrier that needs to be overcome in order to effectively implement needed strategies for change.

Some participants offered new and innovative strategies to improve health locally such as telehealth and alternative means of transportation.

The biggest issues to emerge from the focus groups included:

- Physician recruitment, retention, and reimbursement
- Mental health resources and services
- Substance Use Disorders
- Transportation
- Chronic Disease Management (acute lifestyle change as well as palliative care)

- Obesity/Overweight: childhood specifically

Qualitative data from the focus groups on specific health topics has been incorporated into those particular sections of the needs assessment report.

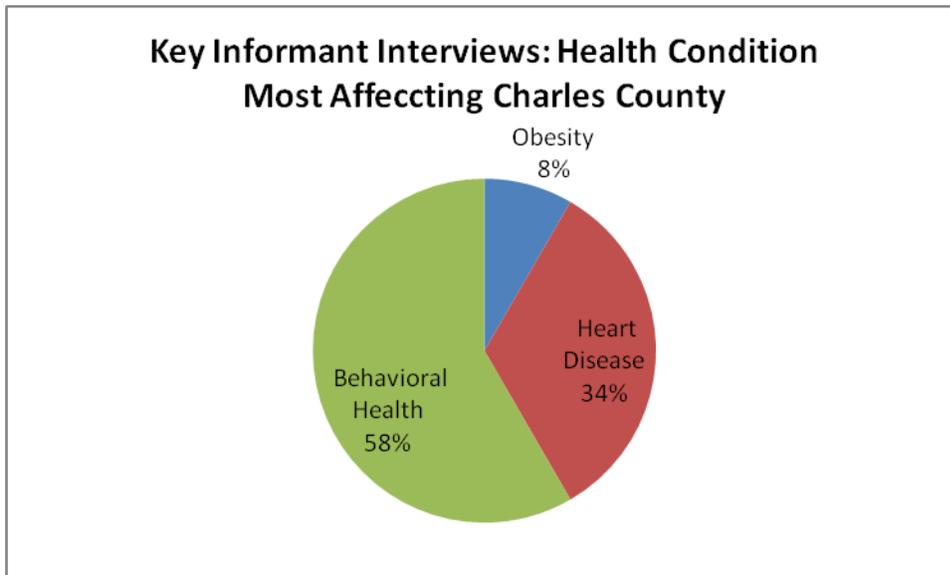
Behavioral Health Key Informant Interviews:

Due to scheduling conflicts and unforeseen circumstances, focus groups surrounding behavioral health could not be completed. Therefore, it was decided that key informant interviews would be conducted with behavioral health professionals and leaders within the county. A total of 9 key informant interviews were conducted for this assessment. There was a mix of individuals from both the mental health and substance use disorder arenas. Individuals also represented both the prevention and treatment sides. Various county agencies participated in the key informant interviews including but not limited to the Charles County Department of Health, the Charles County Sheriff's Office, and the University of Maryland Charles Regional Medical Center.

The interviewed persons were asked a series of six questions. Some were multiple choice and they were just asked to choose the most appropriate answer. Others were open ended questions that required some discussion and insight. The results of the key informant interviews and the overall themes are presented below.

1. What do you think is the health condition most affecting Charles County?

The majority of the respondents felt that behavioral health was the health condition most affecting Charles County (58%). Some of the respondents chose more than one health condition, citing that they felt that they were equally important.



2. What do you perceive to be the health problems/issues of the local community?

Behavioral health, substance use, and mental health were the themes that were repeated among the different key informant interviews. Some cited specific problems such as a lack of psychiatry and lack of education on health issues.

- Substance use

- Mental Health
- Shortage of psychiatry for adults and children
- Behavioral Health
- Lack of education about health issues
- Difficulty in finding physicians and primary care providers that take state insurance
- Obesity
- Cancer
- Cardiovascular Disease, including heart disease and hypertension
- Educational opportunities for wellness care
- Diabetes

3. Are there barriers and gaps in services affecting behavioral health in Charles County?

A lack of behavioral health services, mental health in particular, was repeated during the majority of the key informant interviews. Those interviewed also talked about the social determinants of health that prevent access to care including cost, transportation, and health insurance coverage.

- It is difficult to identify the trauma and issues that lead substance use initiation. Some individuals sustained an accident and started with a legitimate use of opioids. Some are living with co-occurring mental health and substance use disorders.
- There are not enough mental health options.
- There is stigma associated with seeking treatment for mental health and substance use.
- Barriers include health insurance, lack of affordable care, and lack of funding for those who need substance use or mental health treatment.

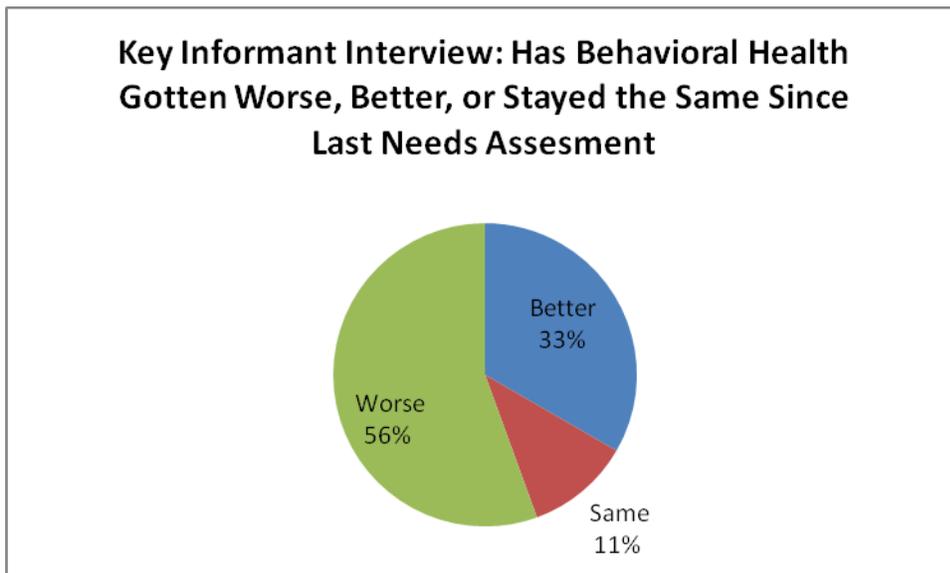
- Lack of support from commissioners and court systems (little support or funding from them and no follow through on referring people to treatment that are legally involved.)

Insurance coverage, transportation, housing, and medication management

- Preconceived perceptions and bias prevent many from seeking care.
- There are limited services for behavioral health.
- Services are mostly in Waldorf and La Plata. It is difficult for people without transportation in outlying towns.
- Cost and lack of access to behavioral health services
- Gaps in mental health services

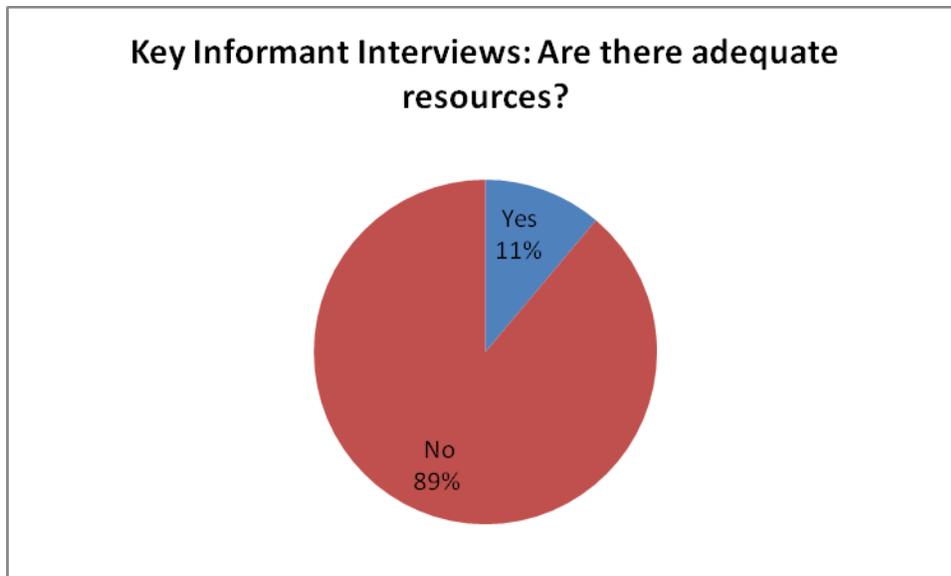
4. Since the 2015 Health Needs Assessment, do you feel that health has improved, stayed the same, or gotten worse in respect to behavioral health?

Just over half of the key informant interviewees (55%) felt that health has gotten worse in the county in respect to behavioral health since the 2015 health needs assessment.



5. Do you feel there are adequate resources in Charles County to address substance use?

The overwhelming majority of the key informant interviewees did not feel that there are adequate resources in Charles County to address substance use.



6. What key changes could the community implement to improve health locally?

Many of the responses surrounded the need for additional behavioral health services within the county, particularly increased capacity for psychiatry.

- The work of the peer recovery coaches in substance use is a key change currently being implemented. Their work with the health department and the Sheriff's Office will help open communication with the community and decrease the fear associated with law enforcement in overdose response.
- More education on behavioral health
- Cooperation of the school system with substance use prevention efforts
- Funding for local treatment for those that are uninsured and/or do not make enough money to pay for treatment
- Housing availability
- Increase pay for psychiatrists to commute to Southern Maryland. It needs to be competitive with Anne Arundel and Montgomery Counties.
- After hours crisis management
- Go teams for the homeless and year round Safe Nights program

- Hold clinics
- Education in areas outside Waldorf and La Plata
- More psychiatric facilities nearby
- More resources within the hospital to accommodate psychiatric patients
- More funding and services, public transport increase
- Educational campaigns for chronic conditions

Long Survey Results:

Introduction:

A 27 question online survey was developed in the summer of 2017. Some of the questions had several components. It was designed using Survey Monkey, and a link was provided on the University of Maryland Charles Regional Medical Center website and the Charles County Department of Health website. The first set of question gathered demographic information for all participants. A second set of questions asked people about their own health status and their access to needed health care. A third set of questions asked participants about their risk factors for health conditions (example, fruit and vegetable intake, physical activity level, alcohol/tobacco use) to determine if they are at risk for certain health conditions and chronic diseases. The fourth set of questions asked participants about their perceptions of the state of health and health conditions within Charles County. A fifth set of questions asked participants perceptions of improvements within the county to improve health. Lastly, survey respondents were given the opportunity to comment on the state of health in the county and provide suggestions on how to improve the health status of Charles County.

There were a total of 846 participants took the survey. Some questions were not completed by all survey participants. Not every question was applicable to every participant. Some questions were skipped. Data for each question was compiled and analyzed.

The results of the survey analysis are presented below by category.

Demographic Information:

The majority of the survey participants were from Charles County (82.4%). The second largest population was from neighboring St Mary's County (7.22%). Residents of neighboring counties were included in the analysis since there is a lot of movement between the counties. A large portion of individuals work or spend time in Charles County.

County of Residence:	Response Count	Response Percent
Charles County	655	77%
St Mary's County	103	12%
Calvert County	34	4%
Prince George's County	30	4%
Other Maryland County	10	1%
King George County	6	1%
Other Virginia County	4	.5%
Blank/Unknown	4	.5%

Responses varied across all age groups. Considerable effort was taken to ensure that all age groups were represented in the sample. The age group with the largest number of participants was 55-64 years.

Age Group	Response Count	Response Percent
18-24 years	29	3.46%

25-34 years	111	13.25%
35-44 years	179	21.36%
45-54 years	202	24.11%
55-64 years	212	25.30%
65-74 years	82	9.79%
75 years and older	23	2.74%

The majority of the long survey participants were female (80%). We worked very hard to increase participation among Charles County males and managed to increase from 19% in the 2015 survey to 20% in the 2018 survey.

Gender	Response Count	Response Percent
Male	165	20%
Female	665	80%

Minorities made up 23% of the total 2018 survey population. African Americans comprised 17% of the respondents, followed by 3% for 2 or more races, 2% Asian, and 1% American Indian/Native American.

Race/Ethnicity	Response Count	Response Percent
Asian or Pacific Islander	16	2%
Black or African American	143	17%
Native American	5	1%
2 or more races	21	3%
White or Caucasian	640	77%

Respondents were asked to give their ethnicity. Approximately 4% of the survey respondents self identified as Hispanic. This is similar to the county overall Hispanic population of 5%.

The survey participants were a highly educated group with 89.97% reporting having had any amount of college education. Just over half of the group had completed an undergraduate degree or higher (50.42%).

Educational Attainment	Response Count	Response Percent
Some High School	2	0.24%
High School Diploma	82	9.8%
Some College	331	39.55%
Undergraduate Degree	243	29.03%
Postgraduate Degree	179	21.39%

The majority of the participants completing the long survey were employed and working full time (73%). 7.01% were employed part time. 12.94% were retired. Only 1.09% of the participants labeled

themselves as not employed and looking for work. Participants were asked to check all labels that were applicable. For example, they may be a full time student who is employed part time.

Employment Status	Response Count	Response Percent
Employed Full time	606	73.28%
Employed Part time	58	7.01%
Not employed, looking for work	9	1.09%
Not employed, not looking for work	6	0.73%
Homemaker/Stay at home mom	16	1.93%
College Student	3	0.36%
Retired	107	12.94%
Disabled	15	1.81%
Prefer not to answer	7	0.85%

Participants were asked to report their household income. The most common response was a household income of \$60,000-\$120,000 per year (39%). In the 2011 survey, most of the respondents were affluent and reported a household income greater than \$75,000. Efforts were made to encourage participation from county residents with low income status, so the overall data would not be skewed by those with health insurance and greater access to care. Individuals with a household income less than \$60,000 made up one-quarter of the 2018 survey.

It is a weakness of this survey that the categories of income were too large and did not stratify income levels more closely. For example, there is a significant difference between a household with an income of \$60,000/year and one that makes \$119,999. They are in the category but would have differing abilities in accessing health care.

Household Income	Response Count	Response Percent
\$0-\$29,999	39	4.79%
\$30,000-\$59,999	117	14.36%
\$60,000-119,999	321	39.39%
\$120,000-\$179,999	177	21.72%
Greater than \$180,000	89	10.92%
Prefer not to answer	72	8.83%

The participants were asked to report all types of health insurance that they current have. Nearly all of the survey participants (97.59%) reported having health insurance. The majority of the participants also reported having dental insurance (85.92%) though this percentage is smaller than those reporting health insurance. Many of the respondents also had vision insurance (72.68%). Only 1.56% of the survey population reported having no type of insurance.

With the advent of the Affordable Care Act and the efforts of the Maryland Health Benefits Exchange, it was hoped that many survey participants would have access to health insurance regarding of income status.

Forms of Insurance	Response Count	Response Percent
Health	811	97.59%
Dental	714	85.92%
Vision	604	72.68%
Don't Know	4	0.48%
No insurance	13	1.56%

Among those having health insurance, almost half have a form of managed care health insurance plans such as HMO or PPO (48.86%). Approximately one-third have traditional, private insurance (38.32%). Only 1.68% reported that they do not have any health insurance.

Current Type of Health Insurance	Response Count	Response Percent
Private-traditional	320	38.32%
Management Care (HMO, PPO)	408	48.86%
Medicare	115	13.77%
Medicaid, MCO, medical assistance	25	2.99%
Government (MCHIP)	5	0.60%
Tricare	48	5.75%
Health Savings Account	46	5.51%
Other	21	2.51%
Don't Know	8	0.96%
Do not have health insurance	14	1.68%

Health Status:

Participants were asked to rate their current health status as poor, fair, good, very good, or excellent. The most common answers were “Good” (34.57%) and “Very Good” (38.41%). 12.39% reported that they were in fair to poor health. That is an increase from the 2015 survey where only 8% reported that they were in fair or poor health.

Health Status	Response Count	Response Percent
Poor	13	1.61%
Fair	87	10.78%
Good	279	34.57%
Very Good	310	38.41%
Excellent	118	14.62%

People were also asked how many days in the past month were they too sick to work or do activities. Two-thirds of the respondents reported that there were no days in past month that prevented them from work or activities (63.43%). Among those reporting sick days, most reported having been prevented from work or activities 1-2 days in the past month (22.14%).

Days to sick to work/do activities	Response Count	Response Percent
0	510	63.43%
1-2	178	22.14%
3-5	61	7.59%
6-10	18	2.24%
10 or more	37	4.60%

Access to Care:

Most of the survey participants reported having a routine doctor’s visit in the last 12 months (84.76%). Only 1% reported that they have never had a routine doctor’s visit.

Time since last doctor’s visit	Response Count	Response Percent
Within the last 6 months	519	64.31%
Within 6-12 months	165	20.45%
Within 13-18 months	46	5.70%
Within 19-24 months	25	3.10%
Within 2-5 years	35	4.34%
Greater than 5 years	9	1.12%
Never had a routine doctor visit	8	0.99%

Most of the survey participants received their routine health care in a physician’s office (94.2%). In addition to routine medical care, 26.73% went to eye doctor, 32.28% went to the dentist, and 4.92% went to the chiropractor. Many of the respondents also reported that they are under the routine care of specialists such as oncologists, OBGYN’s, and orthopedics.

There was also a large population who reported that they get their routine care at an urgent care center (15.64%). This may be due to a lack of primary care providers and the inability to get an appointment to see them in a timely manner.

It is believed that the routine care by the listed specialists (ex. Dentist and eye doctor) was underreported. Participants were asked to check all locations that applied; however, it is theorized that they did not read all the responses and checked only physician’s office even if they also routinely see the dentist.

Where they receive routine care	Response Count	Response Percent
Physician’s Office	747	94.2%
Hospital Emergency Department	19	2.4%

Health Department Clinic	3	.38%
Urgent Care Center	124	15.64%
Chiropractor	39	4.92%
Medical/First Aid Center	3	.38%
Community Clinic	8	1.01%
Specialists (OBGYN, oncologist)	190	23.96%
Eye Doctor	212	26.73%
Dentist	256	32.28%

The majority of the survey participants were able to see the doctor when needed (70.54%). There were 24 people who reported that they were seldom or never able to see a doctor when needed. If they were unable to see the doctor when needed, the most common reasons were that there were no available appointments (34.11%) or that it was too expensive and they could not afford it (5.74%).

The percentage of people reporting that there were no available appointments increased from 13% in 2015 to 34.11% in 2018.

Able to see doctor when needed	Response Count	Response Percent
Always	565	70.54%
Sometimes	212	26.47%
Seldom	21	2.62%
Never	3	0.37%

Reasons for not seeing doctor	Response Count	Response Percent
No health insurance	16	2.48%
Too expensive/Can't afford it	37	5.74%
Have not met deductible for yr	12	1.86%
Lack of transportation	4	0.62%
Doctor is too far away	20	3.1%
No available appointments	220	34.11%
I was able to see a doctor when I needed one.	385	59.69%

Only 15.88% reported that they never receive medical care outside of Charles County. Nearly half of the respondents (50%) claimed that they sometimes receive medical care outside of the county.

Receive medical care outside of Charles County	Response Count	Response Percent
Always	79	9.98%
Sometimes	400	50%
Seldom	124	15.5%
Never	127	15.88%
I live in another county and	70	8.75%

receive care there.		
---------------------	--	--

Participants were asked what medical services that they receive outside of Charles County. They were asked to check all services that were applicable. The most common medical services that people receive outside of Charles County are specialist doctor appointments (58.61%), primary care doctor appointments (24.44%), hospitalizations (20.11%), and surgery (19.32%).

Services Received Outside of County	Response Count	Response Percent
Primary Care Doctor Appointments	186	24.44%
Specialist Dr Appointments	446	58.61%
Outpatient treatment	70	9.2%
Hospitalizations	153	20.11%
Dental Appointments	141	18.53%
Mental Health or Substance Abuse Treatment	48	6.31%
Laboratory or other tests	86	11.3%
X-rays	85	11.17%
Surgery	147	19.32%
Emergency Care	83	10.91%
Prenatal care	28	3.68%
Do not travel outside Charles County	102	13.4%
I live in another county and receive care there.	88	11.56%

The participants were also asked why they chose to receive those medical services outside of Charles County. The most common responses were that the services were not available in Charles County (21.78%) and the quality of care was better elsewhere (39.26%).

Why do you travel outside of Charles County for care?	Response Count	Response Percent
Services not available within county	147	21.78%
Quality is better elsewhere	265	39.26%
Recently moved to Charles County	19	2.81%
Local doctors not on my insurance plan	41	6.07%
Closer to my place of work	25	3.7%
Too hard to get appointment for local doctors	38	5.63%
No physician available for the	84	12.44%

type of care I need		
Not applicable	144	21.33%
I live in another county and receive care there.	116	17.19%

Doctors, employers, and the Internet are highly used means for obtaining needed health information. Nurses, pharmacists, and the health department were smaller yet significant sources of health information. This particular question stresses the importance of educating local health care providers and emphasizes the need for accurate medical information on the Internet and for employee wellness programming.

Where do you get health information?	Response Count	Response Percent
Churches	10	1.28%
Primary Care Doctor	669	85.66%
Nurse	123	15.75%
Pharmacist	164	21.00%
Hospital	112	14.34%
Health Department	90	11.52%
Public Library	24	3.07%
Community Clinic	10	1.28%
Employer	157	20.10%
Internet/Websites	402	51.47%

Behavioral Risk Factors:

The Top Protective Factors (greatest percentage reporting that they consistently do these activities) include:

- Always wear seat belt (93.77%)
- Always wash hands after using bathroom or before making food (79.33%)
- Always follow road safety rules (48.91%)
- Always get a flu shot each year (55.56%)
- Never drink 3 or more alcoholic drinks each day (61.43%)
- Never use illegal drugs or misuse prescription drugs (86.6%)
- Never smoke (74.2%)
- Avoid exposure to second hand smoke at home or work (59.87%)
- Never use e-cigarettes (82.75%)

- Never use heroin or opioids (87.20%)
- Never use marijuana (81.95%)
- Always practice safe sex (42.91%)

The Top Risk Factors that increase the chances of chronic/infectious disease or injury (lowest percentage reporting that they always do these activities) include:

- Participate in 1 hour of physical activity each day (14.27%)
- Eat 5 servings of fruit and vegetables a day (12.45%)
- Perform self exams for cancer (11.82%)
- Get 7-9 hours of sleep each night (14.83%)
- Use sunscreen regularly (23.39%)
- Take a vitamin daily (41.77%)

Risk and Behavioral Factors:	Always	Most of the time	Sometimes	Rarely	Never	Not applicable
Use a seatbelt?	737	32	12	4	0	1
Wear a helmet while riding a bicycle?	160	58	47	48	90	377
Wear a helmet while riding a scooter, ATV, or motorcycle?	174	23	19	8	19	539
Eat 5 or more servings of fruits and vegetables each day?	97	193	309	152	27	1
Eat fast food more than once a week?	48	101	257	262	105	7
Drink more than 5 alcoholic beverages in one sitting?	4	6	74	175	459	59
Drink more than three alcoholic beverages per day?	2	9	56	170	481	65

Smoke cigarettes, cigars, pipes, or cigarillos?	42	17	17	29	578	96
Smoke e-cigarettes?	2	7	9	16	642	100
Use smokeless tobacco (chew, snuff, dip)?	6	3	0	5	659	106
Get exposed to second hand smoke at home or work?	21	18	79	126	467	69
Use marijuana?	5	8	9	16	640	103
Misuse prescription opioids or use heroin?	0	2	0	3	681	95
Use other illegal drugs?	0	0	3	4	672	97
Perform self-exams for cancer?	91	134	253	144	126	22
Wash hands after using the bathroom or before making food?	618	130	24	3	3	1
Use sunscreen regularly?	182	272	188	72	48	16
Get a flu shot every year?	430	84	57	46	142	15
Practice safe sex (ex. use a condom, get tested)?	330	55	25	12	70	277
Take a vitamin or supplement daily?	325	129	118	75	118	13
Get 7-9 hours of sleep each night?	116	250	249	119	45	3
Feel stressed out or overwhelmed?	61	162	374	157	20	5
Follow road safety	381	332	48	8	1	9

rules?

Participate in 30 minutes of physical activity each day?	111	199	275	154	32	7
--	-----	-----	-----	-----	----	---

Health Issues:

Participants were given a list of 32 different health issues and conditions that affect Charles County residents. They were asked their perceptions of health by rating what problem level these particular issues present to the community: not a problem, slight problem, a moderate problem, a serious problem, or not sure.

23. How serious are these health problems/conditions in Charles County?

Answer Options	Serious Problem	Moderate Problem	Slight Problem	Not a problem	Not sure/ Don't know	Response Count
Drug Use	494	160	63	44	176	734
Alcohol Use	329	215	46	49	106	745
Tobacco Use	309	209	56	55	117	746
Asthma and lung diseases	162	207	68	44	255	736
Cancer	254	194	32	44	215	739
Child Abuse and Neglect	156	229	96	48	212	741
Crime	266	281	76	46	71	740
Domestic Violence	187	252	74	46	184	743
Prenatal and Infant health	70	167	129	61	302	729
Diabetes/Sugar	247	184	71	32	203	737
Affordable health care	291	160	63	44	176	734
Health Insurance	245	181	64	45	199	734
Access to health care	188	209	94	82	157	730
Affordable housing	304	176	66	62	130	738
Dental health	178	194	91	69	204	736
Flu/Pneumonia	62	173	165	77	254	731
Mental health	285	199	60	39	147	730
Obesity/Overweight	370	191	52	23	100	736
Disability Services	129	188	99	68	240	724
After school programs for kids	116	144	113	87	274	734
Sexually transmitted infections	123	122	84	54	247	730
HIV/AIDS	90	112	111	54	362	729
Suicide	133	158	130	56	246	723
Heart Disease	214	185	57	39	227	722
High Blood Pressure	272	170	51	28	214	735
Stroke	167	176	73	47	269	732
Injuries	87	175	124	48	291	725
Highway Safety/Traffic Accidents	227	238	108	46	114	733
Public Transportation	249	164	104	63	151	731

Traumatic Brain Injury/Concussions	66	108	135	62	359	730
Homelessness	283	185	100	49	114	731
Environmental Health/Air Quality	93	162	158	90	230	733
Veteran Health	170	162	94	49	258	733

The top 5 health issues seen as a problem at any level were: drug use, crime, overweight/obesity, health insurance, and alcohol use. It should be noted that two of the top five issues are related to substance use disorders.

The top 5 most seriously viewed health issues were: drug use, overweight/obesity, alcohol use, tobacco use, and affordable housing. It should be noted that three out of the five top 5 most serious health issues are substance use disorders.

The top 5 health issues seen as a moderate problem were: crime, domestic violence, highway safety/traffic accidents, child abuse and neglect, and alcohol use.

The top 5 health issues seen as a slight problem were: Influenza/Pneumonia, Environmental Health, traumatic brain injury/concussions, suicide, and prenatal and infant health.

The top 5 health issues not seen as a problem in Charles County were: environmental health, after school programs for kids, access to health care, Influenza/Pneumonia, and dental health.

Health Improvements in Charles County:

One third (33%) of the survey participants reported that they have seen improvements in the health of Charles County residents.

Health Improvements being made in County?	Response Count	Response Percent
Yes	245	33.24%
No	187	25.37%
Don't Know	305	41.38%

The top five health issues where participants have seen improvements include: access to health care, tobacco use, diabetes, mental health, and substance use. Over half of the respondents to this question (58%) have seen improvements to increase access to health care within the county.

Health Issues where improvements have been seen	Response Count	Response Percent
Heart Disease	49	17.44%
Cancer	52	18.51%
Diabetes	63	22.42%
Asthma/Lung Diseases	21	7.47%
Tobacco Use	84	29.89%

Substance Use	54	19.22%
Mental Health	62	22.06%
High Blood Pressure	36	12.81%
Stroke	26	9.25%
Traffic Accidents	39	13.88%
Injuries	17	6.05%
Overweight/Obesity	33	11.74%
Access to health care	163	58.01%
Access to needed medications	45	16.01%

Respondents were asked if they had any recommendations or suggestions on how to improve health in Charles County. The most common responses included mobile health screenings, increased health education and workshops, more mental health and psychiatric services in the county, more physicians and specialists, more advertisement of available services, emphasis on preventative care, and more health services in the western and southern parts of the county.

Additional Long Survey Results: Most Serious Health Issues among Various Populations

Long survey data was stratified to determine the most serious health issues reported among different county populations. Only groups with a sample size greater than 100 participants were included to maintain data validity. The groups included in this analysis were: men, women, minorities, households with an income less than \$60,000, young adults aged 18-34 years, individuals with a low education level (high school diploma or less), and individuals with a high education level (some college or greater).

The top 5 most serious health issues varies among the populations analyzed. Drug Use was seen as the most serious health issue for all stratified groups. Obesity ranked as the second most serious health issue for men, women, young adults, those with low educational levels, those with high educational levels, and those with low income levels. Alcohol ranked third for men, women, and those with high educational levels.

Top 5 Most Serious Health Issues by Population:	#1	#2	#3	#4	#5
<i>Men</i>	Drug Use	Obesity	Alcohol Use	Crime	Tobacco Use
<i>Women</i>	Drug Use	Obesity	Alcohol Use	Tobacco Use	Affordable Housing
<i>Minorities</i>	Drug Use	Affordable Housing	Tobacco Use	Mental Health	Alcohol Use
<i>Young Adults</i>	Drug Use	Obesity	Homelessness	Mental Health	Tobacco Use

<i>(18-34 years)</i>					
<i>Low Income (household income less than \$60,000/year)</i>	Drug Use	Obesity	Affordable Housing	Affordable Health care	Alcohol Use
<i>Individuals with low education level (High school diploma/GED or less)</i>	Drug Use	Obesity	Crime	Affordable Housing	Homelessness
<i>Individuals with higher education level (Some college, undergraduate degree, postgraduate /professional degree)</i>	Drug Use	Obesity	Alcohol Use	Tobacco Use	Affordable Housing

Short Survey Results:

Introduction:

A short 5 question survey was developed to distribute throughout the county for additional qualitative data from July 1, 2017 through February 1, 2018. A total of 1,317 surveys were completed throughout the community. Particular emphasis was given to the collection of data among the county's vulnerable populations including the medically underserved, the homeless, the geographically isolated, and the elderly and young adults. Ongoing survey collection was conducted at the Charles County Department of Health's Nursing, Substance Abuse, and Mental Health Divisions; the University of Maryland Charles Regional Medical Center's Waiting Rooms, Cardiac Rehabilitation Program, Urgent Care Center, and Primary Care practice; Health Partners Inc; University of Maryland Extension Office; Health Partners Western County Community Health Center; White Plains Primary Care; Lifestyles of Maryland Inc; Lifelong Learning Center; Center for Children's Healthy Families; Charles County Department of Aging; Charles County Government; and Cambridge Pediatrics. The community was also surveyed at large events such as Mission of Mercy, Charles County Homeless Resource Day, the Charles County Fair, the Cancer Walk in Indian Head, and other community outreach events.

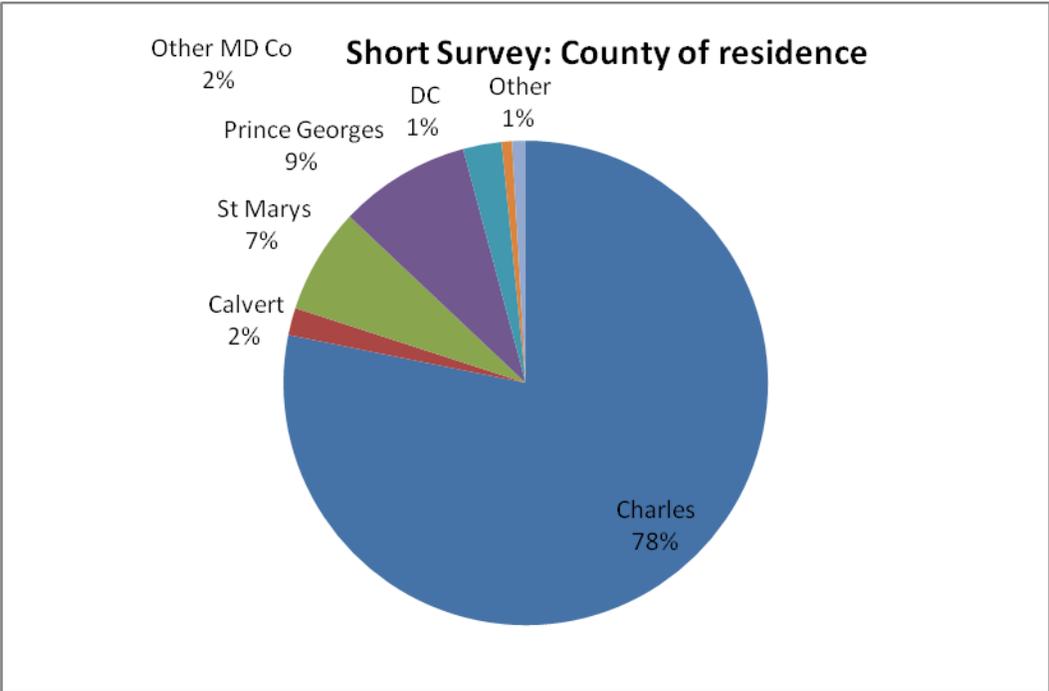
The results of all the surveys combined are presented below.

All accumulated surveys:

Question 1: County of residence

The majority of the short survey respondents were residents of Charles County (78%). There were individuals from Calvert, St Mary's, and Prince George's Counties and individuals from King George, Virginia and Washington DC. Their answers were included since individuals may work, spend time, or access medical care in Charles County.

<u>County of residence</u>	<u>Count</u>
<i>Charles County</i>	1032
<i>St Mary's County</i>	93
<i>Calvert County</i>	24
<i>Prince George's County</i>	116
<i>Other Maryland County</i>	34
<i>King George County, Virginia</i>	3
<i>District of Columbia</i>	3
<i>Other</i>	12



Question 2: What do you believe to be the biggest health problems in Charles County today?

Over half of the respondents (53%) felt that substance use is the biggest health issue in Charles County. It was the most commonly marked answer to Question 2. The second health issue most commonly cited by survey respondents was Obesity (45%).

Other health conditions that ranked high as major health problems include: smoking/tobacco use (36%), diabetes (43%), and cancer (37%).

Issues that participants rarely reported as significant health problems included injuries (6%), asthma (16%), and traffic accidents and highway safety (18%).

Percentages will not equal 100% since short survey participants were permitted to check as many health conditions that applied.

Biggest Health Problems:	Response Count	Response Percent
<i>Access to care/no health insurance</i>	258	20%
<i>Alcohol and Drug Use</i>	698	53%
<i>Asthma/ Lung Diseases</i>	211	16%
<i>Cancer</i>	484	37%
<i>Dental Health</i>	251	19%
<i>Diabetes</i>	561	43%
<i>High Blood Pressure/Stroke</i>	437	33%
<i>Heart Disease</i>	409	31%

<i>Injuries</i>	79	6%
<i>Mental Health</i>	454	34%
<i>Other</i>	91	7%
<i>Overweight/Obesity</i>	588	45%
<i>Tobacco/Smoking</i>	472	36%
<i>Traffic Accidents/Highway Safety</i>	231	18%

Write ins included cost of care, transportation, access to healthy food, homelessness, lack of healthcare services in western county, epilepsy, Alzheimer's Disease/Dementia, food allergies, health literacy, affordable housing, crime, developmental disabilities, sexually transmitted infections, HIV/AIDS, teen pregnancy, infectious disease/influenza, and dialysis.

Question 3: What do you think are the problems that keep you or other Charles County residents from getting the health care they need?

The most commonly cited barriers to needed health care was lack of health insurance (43%) and care is too expensive/can't afford it (57%). Under "Other", several people explained that they do not have dental or vision insurance to cover those needed services, high deductibles/co-pays, services were not covered by their insurance, legal status, not enough providers, fear, not aware of services, and language barriers.

Barriers to getting health care:	Response Count	Response Percent
<i>Couldn't get an appointment with my doctor</i>	175	13%
<i>Doctor is too far away from my home</i>	132	10%
<i>Local doctors are not on insurance plan</i>	285	22%
<i>No health insurance</i>	570	43%
<i>No transportation</i>	292	22%
<i>Service is not available in my own county</i>	131	10%
<i>Too expensive/Can't afford it</i>	745	57%
<i>Other</i>	117	9%

Question 4: Do you have any ideas or recommendations to help decrease the health problems in the county or to solve the problems with access to health service?

Commonly cited Ideas and recommendations for improving the status of health in Charles County included:

- Access to experienced doctors: faster access, recruitment to the county, particularly specialists
- Health insurance: availability and acceptance by local physicians
- Lower cost of health services and medications

- Eating healthier
- Exercising more
- More free or low cost health education programs on managing and preventing chronic disease
- More advertisement of programs within county
- Transportation to medical services (gas vouchers, VanGo passes)
- More public awareness and prevention education
- Free or low cost medical and dental clinics like Mission of Mercy
- More urgent care centers
- More mental health resources and providers
- Decrease youth access to drugs and alcohol
- Mobile services for dental and medical in schools and in low income communities

Question 5: Are sufficient services and resources available in Charles County to address these health issues/conditions?

Responses varied for every health condition listed. Many of the respondents answered that they did not know or they left it blank. This leads us to believe that additional outreach and awareness campaigns are needed to educate people on available services in Charles County.

Drug and Alcohol use received the greatest number of "Many services available" responses. This was followed closely by services for high blood pressure.

Respondents were given the option of "some services available" in Charles County to address this issue. Mental health received the greatest number of responses for some services available. The second most common answer was drug and alcohol use.

Dental health received the greatest number of responses in the "No services available" category. This was followed closely by services for mental health.

Resource Availability:	Many services available	Some services available	No services available	I don't know	Blank
<i>Heart Disease</i>	250	281	27	434	325
<i>Cancer</i>	216	318	38	418	327
<i>Diabetes</i>	261	320	24	379	333
<i>Asthma</i>	226	276	33	420	362
<i>Smoking/Tobacco Use</i>	249	300	24	410	334
<i>Drugs and Alcohol Use</i>	370	370	38	373	166
<i>Stroke</i>	210	274	22	450	361
<i>High Blood Pressure</i>	306	279	25	375	332

<i>Traffic/Highway Safety</i>	181	255	40	490	351
<i>Overweight/Obesity</i>	169	304	64	427	353
<i>Access to care for children and adults</i>	277	340	23	337	340
<i>Mental Health</i>	161	376	65	391	324
<i>Dental Health</i>	277	345	67	300	328
<i>Access to care in rural Charles County</i>	118	303	57	482	357
<i>Access to needed prescriptions</i>	287	292	38	363	337

Location:

The location of data collection was recorded to ensure that all county populations have had a chance to voice their opinions on health in the county. The young adult population was surveyed at the Charles County Fair. The medically underserved population was surveyed at the Charles County Department of Health clinics, Health Partners Inc (free health clinic), Mission of Mercy (free dental health event), Homeless Resource Day, Lifestyles, and Center for Children (children’s mental health). The elderly were surveyed at the Department of Aging Indian Head Senior Center, the Charles County AERS program, and the University of Maryland Charles Regional Medical Center Cardiac Rehabilitation Program. The western and rural region of the county was surveyed at the Western County Community Health Center, the Indian Head Senior Center, the Living Well with Chronic Conditions Program, and the Cancer Walk in Indian Head. Families were surveyed at the hospital, health department, Center for Children, the Charles County Fair, Cambridge Pediatrics, White Plains Primary Care, and the University of Maryland Charles Regional Medical Center. Surveys were also available in Spanish and made available at the health department, Mission of Mercy, and Health Partners.

Location of Data Collection:	Count
<i>Mission of Mercy</i>	151
<i>White Plains Primary Care</i>	90
<i>Charles County Department of Health Nursing, Substance Use, and Mental Health Divisions</i>	264
<i>University of Maryland Charles Regional Medical Center Clinics and Cardiac Rehabilitation Program</i>	250
<i>Health Partners Inc.</i>	26
<i>Charles County Government</i>	7
<i>Lifestyles of Maryland</i>	50

<i>Charles County Fair</i>	253
<i>Cambridge Pediatrics</i>	79
<i>Department of Aging Indian Head Senior Center</i>	12
<i>Center for Children</i>	19
<i>Lifelong Learning Center</i>	1
<i>University of Maryland Extension Office</i>	2
<i>Cancer Walk in Indian Head</i>	2
<i>Living Well with Chronic Conditions</i>	18
<i>Community Resource Day</i>	93

Conclusions of Short Survey Analysis:

Over half of the respondents (53%) felt that substance use is the biggest health issue in Charles County. It was the most commonly marked answer to Question 2. The second health issue most commonly cited by survey respondents was Obesity (45%).

The most commonly cited barriers to needed health care was lack of health insurance (43%) and care is too expensive/can't afford it (57%).

Charles County residents felt that there were no services in the county for dental health and mental health.

Many of the suggestions and ideas presented by survey respondents focused around the availability of low-cost or free health and dental services, more education and awareness of county resources, and community outreach and education.

Charles County Geographic and Demographic Profile:

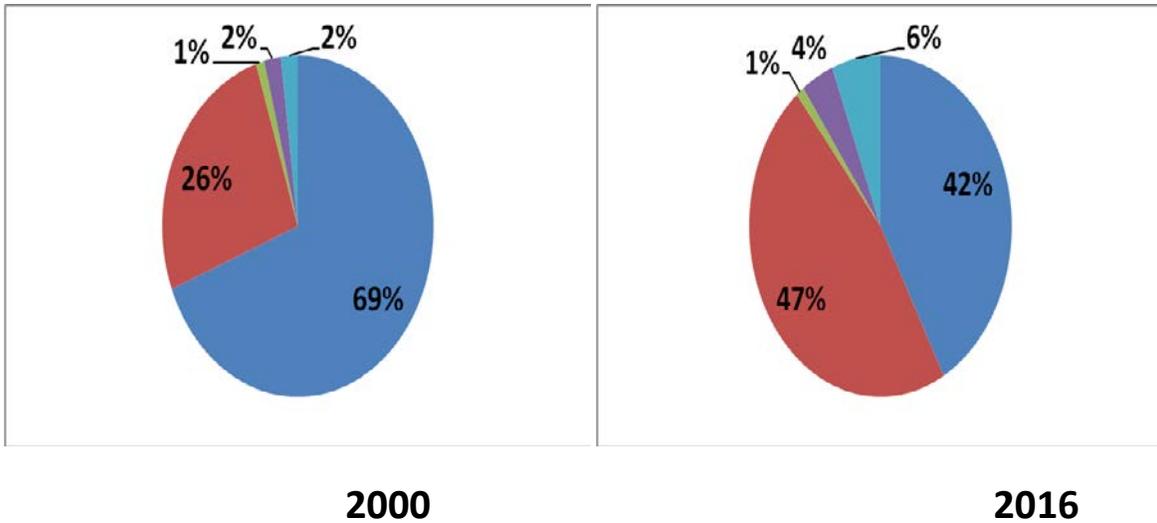
Charles County is a largely rural jurisdiction located approximately 23 miles south of Washington, D.C. It is one of five Maryland counties, which are part of the Washington, DC-MD-VA metropolitan area. At 458 square miles, Charles County is the eighth largest of Maryland’s twenty-four counties and accounts for about 5 percent of Maryland’s total landmass. The northern part of the county is the “development district” where commercial, residential, and business growth is focused. The major communities of Charles County are La Plata, the county seat; Port Tobacco, Indian Head, and St Charles; and the main commercial cluster of Hughesville-Waldorf-White Plains. Approximately 60 percent of county’s residents live in the greater Waldorf-La Plata area. Charles County has experienced rapid growth since 1970, expanding its population from 47,678 to 146,551 in the 2010 census.

The 2016 Charles County population estimate was 157,705. The magnitude of growth can be seen in the changes in population density. The 2000 census showed that there were 219.4 individuals per square mile; by the 2010 census, this estimate rose to 320.2 individuals per square mile. The percent change in the population growth for Charles County from 2010 to 2016 was greater than the change seen in the Maryland state population growth (7.6% vs. 4.2%).

As the population of the county changes, the diversity of the county also increases. The African American population has experienced the greatest increase. In 2000, African Americans made up 26% of the total Charles County population; by 2016, they comprise 46.4% of the total county population. As of 2016, minorities make up roughly 58.3% of the Charles County population. The Hispanic community has also seen increases over the past few years. They now comprise 5.5% of the total county population. This is the one of the highest percentages among the 24 Maryland jurisdictions. Charles County also has one of the largest American Indian/Native American populations in the state of Maryland at 0.8% of the total county population.

Race of Charles County Population, 2000 versus 2016

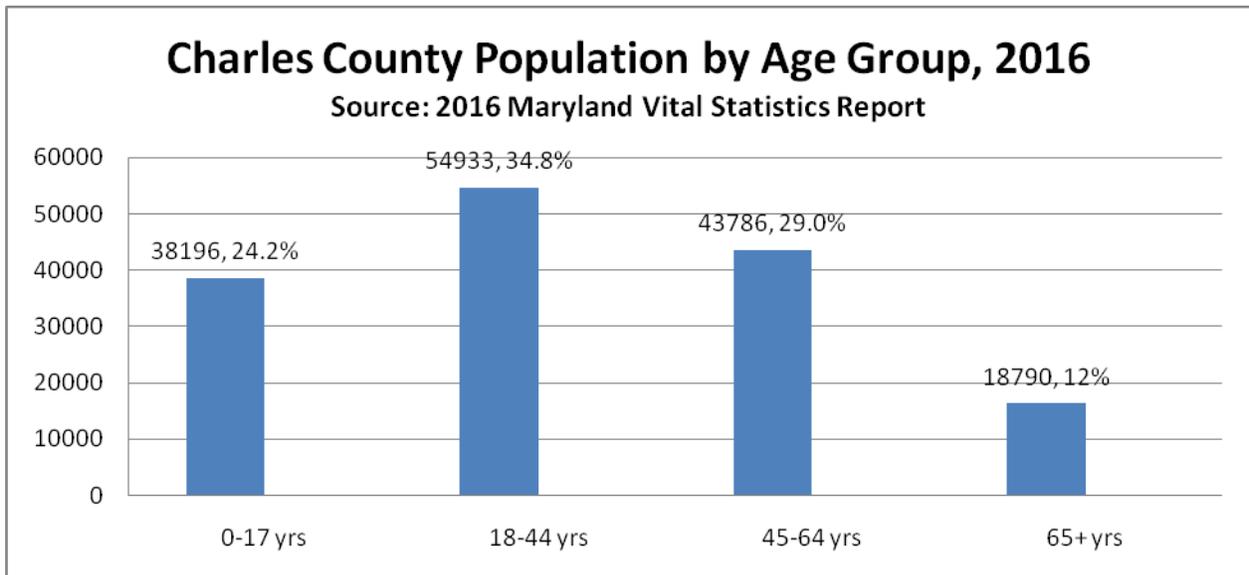
Blue:	Non-Hispanic Caucasian
Red:	African American
Green:	American Indian
Purple:	Asian/ Pacific Islander
Lt blue:	Hispanic



Source: US Census Bureau; Charles County Quick Facts; 2016

The 2016 Charles County gender breakdown is approximately 50/50. Males make up 48.2% of the population, and females make up 51.8% of the county population.

The age breakdown of the Charles County population shows a young population between the ages of 18-44 years (34.8%). The juvenile population (under 17 years) makes up 24.2% of the Charles County population. The 65+ age group has increased from 9% in 2010 to 12% in 2016. The age group 45-64 years has also seen increases from 27% in 2013 to 29% in 2016.



Source: Maryland Department of Health and Mental Hygiene. 2016 MD Vital Statistics Report.

Economy

Employment and economic indicators for the county are fairly strong. The 2012-2016 US Census American Community Survey estimates that 67.7% of the Charles County population is currently in the labor work force. The 2012-2016 5-year estimate for Charles County found that approximately 7.4% of Charles County individuals are living below the poverty level; however, this is lower than the Maryland rate of 9.7%. The Charles County median household income was \$91,373, well above the Maryland median household income of \$76,067. The diversity of the county is also represented in the business community with 46% of all Charles County businesses being minority-owned firms. This is higher than the State of Maryland at 38%.

Source: 2012-2016 US Census Bureau's American Community Survey 5 year estimates

Education

Charles County has a larger percentage of high school graduates than Maryland (92.8% vs. 89.6%); however, Charles County has a smaller percentage than Maryland of individuals with a bachelor's degree or higher (27.4% vs. 38.4%).

Source: 2012-2016 US Census Bureau's American Community Survey 5 year estimates

Transportation

The percent change in the population growth for Charles County has been slightly greater than the change seen in the Maryland population growth. This growth has created transportation issues for the County, in particular for the "development district" in the northern part of the county where many residents commute to Washington D.C. to work. The average work commute time for a Charles County resident is 42.9 minutes which is higher than the Maryland average of 32.4 minutes (Source US Census Bureau's 2012-2016 American Community Survey 5 year estimates). Public transportation consists of commuter buses for out-of-county travel and the county-run Van Go bus service for in-county transportation.

Source: 2012-2016 US Census Bureau's American Community Survey 5 year estimates

Housing

There is a high level of home ownership in Charles County (77.4%); however, this is slightly down from the 2010 level(81.8%). The median value of a housing unit in Charles County is similar to the Maryland average (\$287,600 vs. \$290,400). Home values across Maryland have decreased and Charles County showed a similar downward trend. The average household size in Charles County is 2.81 persons.

Source: 2012-2016 US Census Bureau's American Community Survey 5 year estimates

Social, Economic, and Housing Factors:	Charles County	Maryland
Living in same house 1 year ago, pct 1 yr old & over, 2012-2016	90.3%	86.5%
Foreign born persons, percent, 2012-2016	6.0%	14.7%
Language other than English	7.7%	17.6%

spoken at home, pct age 5+, 2012-2016		
High school graduates, percent of persons age 25+, 2012-2016	92.8%	89.6%
Bachelor's degree or higher, pct of persons age 25+, 2012-2016	27.4%	38.4%
Veterans, 2012-2016	16,283	392,771
Currently in labor force, 16+ years, 2012-2016	67.7%	67.6%
Mean travel time to work (minutes), workers age 16+, 2012-2016	42.9	32.4
Housing units, 2016	59,992	2,447,127
Homeownership rate, 2012-2016	77.4%	66.5%
Median gross rent, 2012-2016	\$1532	\$1264
Median value of owner-occupied housing units, 2012-2016	\$287,600	\$290,400
Households, 2012-2016	54,105	2,177,492
Persons per household, 2012-2016	2.81	2.67
Per capita money income in past 12 months (2009 dollars) 2012-2016	\$37,680	\$37,756
Median household income, 2012-2016	\$91,373	\$76,067
Persons below poverty level, percent, 2012-2016	7.4%	9.7%

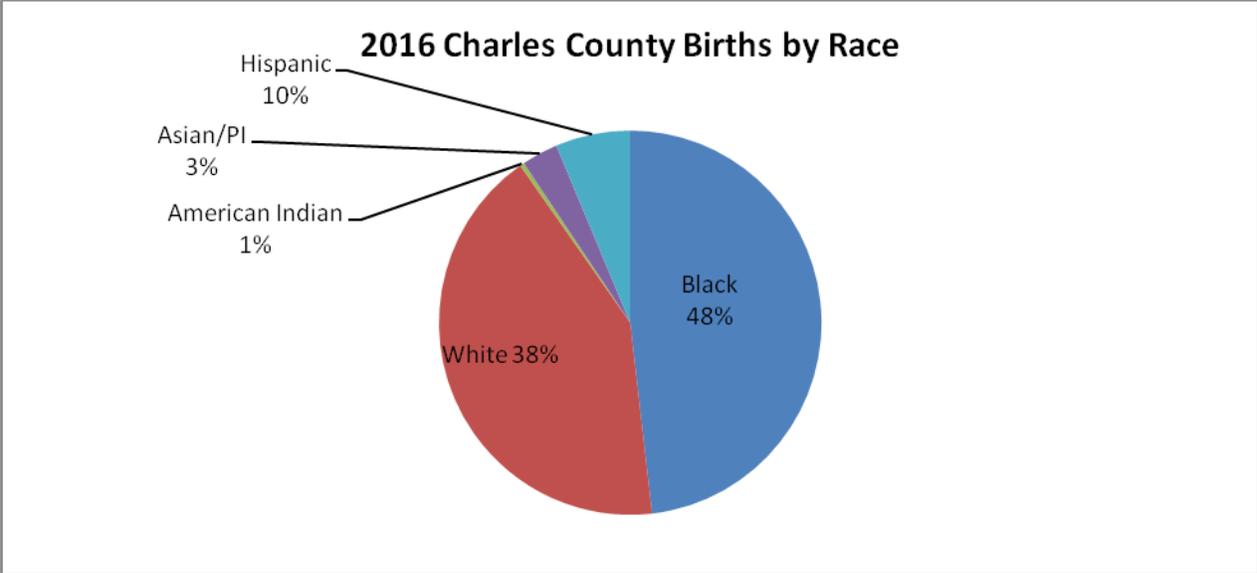
Source: 2012-2016 US Census Bureau, American Community Survey 5 year estimates, Charles County and Maryland

The life expectancy from birth for a Charles County resident as calculated for 2016 was 79.2 years. This is slightly lower than the state average life expectancy of 79.5 years. The 2016 life expectancy for Charles County Whites was 78.9 years. The 2016 life expectancy for Charles County African Americans was 79.3 years.

Births:

There were 1,817 births in Charles County in 2016. Charles County represents 44% of the births in Southern Maryland and 2.5% of the total births in Maryland for 2016.

Minorities made up over half of the babies born in Charles County in 2013 (62%).



Source: 2016 Maryland Vital Statistics Report

In Charles County, birth rates were highest among the Hispanic population at 21.1 per 1000 county population, compared to 11.8 for Blacks and 10.1 for Whites.

For all Charles County births and for Charles County non-Hispanic White, non-Hispanic Black, and Hispanic births, the most common age group for the mother was between 25-29 years. In 2016, there was 1 mother less than 15 years or 4 mothers greater than 49 years.

The birth rate for Charles County mothers aged 25-29 was 105.1. This is higher than the general fertility rate of 56.9 total births per 1000 Charles County women aged 15-44 years. It is also higher than any other age group in Charles County.

2016 Births: Age of Mother	Total	Under 15	15-17	18-19	20-24	25-29	30-34	35-39	40-44	45-49	50+	Not Stated
Charles County Total	1817	1	13	51	349	542	517	280	55	5	4	0
White	684	0	4	14	108	224	221	93	16	2	2	0
Black	872	0	8	32	201	238	214	140	35	2	2	0
Hispanic	184	1	1	4	33	60	50	34	0	1	0	0

2016 Birth Rates per 1000	Overall	Under 15	15-19	15-17	18-19	20-24	25-29	30-34	35-39	40-44	45-49
											45.49

births											
Charles County All races	56.9	**	11.8	3.7	27.1	68.5	105.1	99.5	52.4	9.6	0.7

**Rates based on less than 5 events are not calculated because rate instability.

Over one-third of the babies born in Charles County in 2016 were the first birth order (37.6%). Only a small percentage was the fifth or greater (4.2%).

Birth Order	1st	2nd	3rd	4th	5 or more	Not stated	Total
Charles County	684 (37.6%)	627 (34.5%)	304 (16.7%)	127 (7.0%)	75 (4.2%)	0	1817

42% of all live births in 2016 were to unmarried mothers. 62% of the unmarried mothers were African American.

Unmarried Mothers	All races	White	Black	American Indian	Asian/PI	Hispanic
Charles County	764 (42.0% of all live births)	196 (25.7%)	474 (62.0%)	2 (0.5%)	6 (1.3%)	80 (10.5%)

The percentage of women in Charles County receiving first trimester prenatal care was 65%, which is similar to the Maryland state average percentage of 63%. Charles County percentages for all races were below the Maryland state average percentages. The largest disparity was seen in the Asian or Pacific Islander population (67.8% for Charles County and 80.2% for Maryland).

In Charles County, the Hispanic mothers received the least amount of first trimester prenatal care (66.9%). The Asian/Pacific Islander population also reported that only 56.5% received first trimester prenatal care and only 55.4% of Hispanic women. The highest percentage of women receiving first trimester prenatal care was seen in the White population (70.5%).

Receiving 1 st Trimester Prenatal Care	All races	White	Black	American Indian	Asian/PI	Hispanic
Charles County	1182 (65%)	482 (70.5%)	553 (63.4%)	2 (66.7%)	35(56.5%)	102 (55.4%)
Maryland	46068 (63.0%)	23775 (74.7%)	12780 (54.5%)	74 (55.2%)	3641 (66.8%)	5604 (47.2%)

In Charles County, Hispanics reported the largest percentage of late or no prenatal care (11.4%). Charles County in general had a higher percentage of mothers with late or no prenatal care than Maryland mothers for most races.

Receiving late or no Prenatal Care	All races	White	Black	American Indian	Asian/PI	Hispanic
Charles County	167 (9.2%)	50 (7.3%)	90 (10.3%)	0	5 (8.0%)	21 (11.4%)
Maryland	5805 (7.9%)	1619 (5.1%)	2530 (10.8%)	12 (9.0%)	364 (6.7%)	1251 (10.5%)

Low birth weight mean that a baby is born weighing less than 2400 grams. 10.2% of Charles County births were low birth weight in 2016. The highest percentage of low birth weight babies was among Charles County Blacks at 12.0%.

Low Birth Weight	All races	White	Black	American Indian	Asian/PI	Hispanic
Charles County	186 (10.2%)	58 (8.5%)	105 (12.0%)	2	10 (5.4%)	10 (5.4%)
Maryland	6264 (8.6%)	2086 (6.6%)	2846 (12.1%)	15 (11.2%)	449 (3.8%)	835 (7.0%)

Very low birth weight is defined as a baby weighing less than 1499 grams at birth. For Charles County, the largest percentage of very low birth weight babies is among the Black population (3.8%). This is also true for Maryland Blacks; however, the percentage for Charles County is greater than Maryland (3.8% vs. 2.8%).

Very Low Birth Weight	All races	White	Black	American Indian	Asian/PI	Hispanic
Charles County	46 (2.5%)	9 (1.3%)	33 (3.8%)	1	0	3
Maryland	1228 (1.7%)	343 (1.1%)	664 (2.8%)	4	67 (1.2%)	145 (1.2%)

The percentage of births leading in cesarean section in Charles County in 2016 was 36.0%. The largest percentage was seen among Charles County Blacks with 39.8% of babies delivered by c-section. All Charles County percentages, overall and by race, are similar to state percentages, except Charles County

Asians. The Charles County Asian c section percentage (21%) was well below the state percentage of 34.4%.

Cesarean Section Delivery	All races	White	Black	Asian/PI	Hispanic
Charles County	655 (36%)	232 (34%)	347 (39.8%)	13 (21%)	60 (32.6%)
Maryland	24576 (33.6%)	9948 (31.3%)	9122 (38.9%)	1877 (34.4%)	3490 (29.4%)

In 2016, 1509 out of 1808 Charles County babies were born in the state of Maryland (83.0%). However, only 687 of those babies were born in Charles County (37.8%). This is much lower than the percentage for other surrounding jurisdictions. 52% of Calvert County babies were born in Calvert County, and 79.4% of St. Mary’s County babies are born in St. Mary’s County.

Over half of Charles County babies (1130 or 62%) were born in another Maryland county.

Place of Birth	All Births	State Total	MD Co. same as residence	MD Co other than residence	DC	Other State
Charles County	1817	1509	687	822	139	169

Geographic and Demographic Profile References:

1. 2016 Charles County Current Population Survey Data. United States Census Bureau. Available at: www.census.gov.
2. 2016 Maryland Vital Statistics Report. Charles County Demographic and Population Data. Maryland Department of Health and Mental Hygiene. Available at https://health.maryland.gov/vsa/Documents/2016_Annual_Report.pdf.
3. 2012-2016 US Census Bureau, American Community Survey 5 year estimates, Charles County and Maryland. Available at www.census.gov.

Qualitative Data Specific to the Geographic and Demographic Profile:

Charles County’s changing racial composition was discussed at the focus groups. It was stressed that services must be tailored for specific minorities and ethnicities. For example, providers must be culturally competent on how to deliver health information to increasing Hispanic population. Information must be provided in their language and at their literacy level. Issues of health literacy were raised at many of the focus groups including the minority focused and the medically underserved.

The school nurses also expressed their concern over the growing Hispanic population in the schools. The parents do not speak English, and communication is difficult.

Many focus group participants spoke out about the many programs within the county that are aimed at providing services and supporting minorities within the county, including the Black Leadership Council for Excellence, the Bel Alton Community Development Center, the Charles County Chapter of the National Association for the Advancement of Colored Persons (NAACP), the Western County Family Medical Center, and the Charles County Minority Infant Mortality Reduction Program.

Most focus groups discussed the commuter population in Charles County. Due to its proximity to Washington DC and Baltimore, many individuals who live in the county have long daily commutes for work. Many of the focus group participants expressed the need to get those commuting individuals involved in the community and make them aware of the health services that are available. They were concerned regarding their health status since many of them are sitting all day long. They are tired when they get home and are tempted to use fast food to feed their families. Programs on healthy eating options may be needed to educate this working population.

Homelessness was an important issue discussed at the focus groups. The schools are seeing many more homeless families. They must help those children get to school and receive the necessary health services that they need. Most do not have dental care or immunizations. They also have challenges with their transportation and communication.

Individuals over the age of 65 years make up 10.6% of the total Charles County population, and this percentage will continue to grow over the next decade as baby boomers aged 45-64 years (currently 28% of the county population) move into the older age category. Many focus group participants talked about the need for education regarding emerging health topics of the aging including dementia, Alzheimer's disease, arthritis, Diabetes, cancer, and diseases of the heart. An issue raised in many of the focus groups on chronic disease and aging was the need for a palliative care program in Charles County. There is a subset of the population who are suffering from terminal illness. However, they have not yet reached the point where they are in need of hospice services. They are still able to function to a certain degree and are in need of care to help them manage their chronic conditions and pain.

Charles County Vital Statistics Profile:

Marriage and Divorce:

A total of 888 marriage ceremonies were conducted in Charles County in 2016. Most of those marriages were Maryland residents (825).

Marriage	Total Marriages	Maryland Residents*	Non-MD Residents	% to non-MD residents
Charles County	888	825	63	7.1%

*One or both of the partners are residents of Maryland.

Data on the age of the bride and groom and previous marital status are not available on a county level.

In 2016, there were 102 divorces in Charles County. When examining the numbers of years of marriage at the time of their divorce, the most common response was 25 years and greater.

Divorce and years of marriage at time of divorce	Total Divorces	<2 years	2-3 years	4-5 years	6-7 years	8-9 years	10-14 years	15-19 years	20-24 years	25+ years	Not stated
Charles County	102	4	8	12	11	3	14	12	15	19	4

Mortality:

Death Rates:

There were a total of 1085 deaths in Charles County in 2016.

The 2014-2016 Charles County all cause mortality rate was 722.0 per 100,000 population. This rate is higher than the Maryland state all-cause mortality rate of 706.7 per 100,000 population.

The number one cause of death for the time period 2016 and for the time period 2014-2016 was heart disease. The 2014-2016 Charles County heart disease death rate was 165.2 per 100,000. This is also higher than the Maryland state rate of 166.9 per 100,000.

Charles County had higher 2014-2016 mortality rates than Maryland for cancer, accidents, and diabetes mellitus.

2014-2016 Ten Leading Causes of Death by Count and Rate, Charles County and Maryland

Cause of Death	Charles County Number, 2016	Charles County Rate, 2014-2016*	Maryland Number, 2014	Maryland Rate 2014-2016*
<i>All Causes</i>	1085	722.0	48884	706.7
<i>Diseases of the Heart</i>	241	165.2	11408	166.9
<i>Cancer</i>	253	158.3	10919	157.4
<i>Chronic Lower Respiratory Disease</i>	37	29.7	2073	30.2
<i>Accidents</i>	64	33.0	2282	30.5
<i>Diabetes Mellitus</i>	37	24.5	1357	19.2
<i>Cerebrovascular Diseases</i>	42	26.9	2706	38.4
<i>Influenza and Pneumonia</i>	19	***	1025	16.1
<i>Intentional Self-Harm (Suicide)</i>	19	***	581	9.2
<i>Alzheimer's Disease</i>	10	***	1178	16.1
<i>Septicemia</i>	11	***	878	13.9

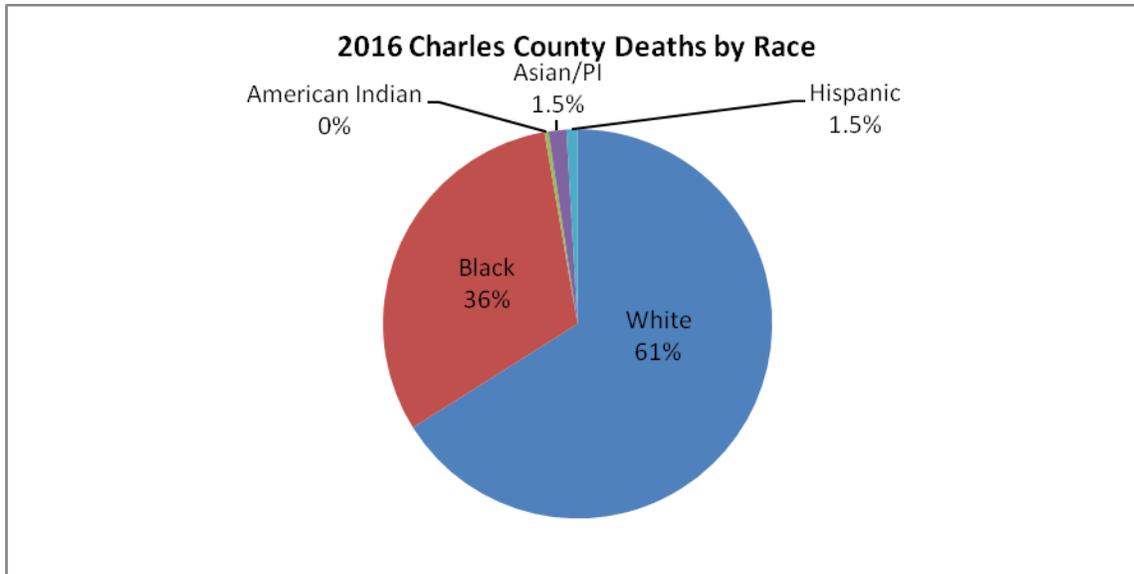
*Per 100,000 population

*** Age-adjusted death rates not calculated for jurisdictions with fewer than 20 deaths.

All Cause Deaths by Race:

Whites make up 61% of the deaths in Charles County. African Americans make up the second highest at 36% of the total deaths.

The rate among the White population is greater than the other races because they make up the majority of the aging population in the county. Two-thirds of the 65+ population in Charles County (66%) are White. The minority populations are moving into Charles County and are a younger population; therefore, they have lower mortality rates. The median age in Charles County is 34 years.



When comparing by 2016 calculated crude death rates, the rate is much higher in the White population. The 2016 Charles County White death rate was 969.5 per 100,000. This is much higher than the Charles County total 2016 crude death rate of 688 per 100,000 and higher than the death rates for Blacks (527.8), for Asians and Pacific Islanders (202.2), American Indian (494.6), and for Hispanics (183.7).

2016 Crude Death Rates:	All Races	White	Black	American Indian	Asian/PI	Hispanic
<i>Charles County</i>	688	969.5	527.8	494.6	202.2	183.7

All Cause Deaths by Age:

The number of reported deaths increased with age. The greatest numbers of deaths were seen in the 75-84 years age group. This age group accounted for one-quarter of the total county deaths for 2016.

Deaths by Age	All ages	<1 yr	1-4	5-14	15-24	25-34	35-44	45-54	55-64	65-74	75-84	85+
<i>Charles County</i>	1085	19	0	3	17	36	43	107	152	219	229	260

In 2016, there were 30 deaths in Charles County for children and adolescents ages 0-21 years.

Child Deaths	0-21 yrs	<1 yr	1-4 yrs	5-9 yrs	10-14 yrs	15-17 yrs	18-19 yrs	20-21 yrs
<i>Charles County</i>	30	19	0	1	2	2	4	2

Adolescent Violent Deaths:

There were 3 violent deaths to adolescents in Charles County in 2016. There was one accident and 2 assaults.

Deaths from Selected Causes:

The number of deaths in Charles County for selected causes is presented below.

All Causes of Death	1085
Tuberculosis	0
Septicemia	11
HIV Disease	0
Total Malignant Neoplasms	253
<i>Malignant Neoplasms of Stomach</i>	7
<i>Malignant Neoplasms of Rectum, Colon, and Anus</i>	24
<i>Malignant Neoplasms of Pancreas</i>	12
<i>Malignant Neoplasms of Trachea, Bronchus, and Lung</i>	54
<i>Malignant Neoplasms of Breast</i>	29
<i>Malignant Neoplasms of Cervix, Uteri, Corpus Uteri, and Ovary</i>	12
<i>Malignant Neoplasms of Prostate</i>	12
<i>Malignant Neoplasms of Urinary Tract</i>	11
<i>Non-Hodgkin's Lymphoma</i>	4
<i>Leukemia</i>	11
<i>Other Malignant Neoplasms</i>	77
Diabetes Mellitus	37
Alzheimer's Disease	10
Total Major Cardiovascular Diseases	347
Total Diseases of the Heart	241
<i>Hypertensive Heart Disease</i>	37
<i>Ischemic Heart Disease</i>	133
<i>Other Diseases of the Heart</i>	71
Essential Hypertension and Hypertensive Renal Disease	20
Cerebrovascular Diseases	37
Atherosclerosis	42
Other Diseases of the Circulatory System	7
Influenza and Pneumonia	19
Chronic Lower Respiratory Diseases	37
Peptic Ulcer	0
Chronic Liver Disease and Cirrhosis	17
Nephritis, Nephrotic Syndrome and Nephrosis	14
Pregnancy, Childbirth, and the Puerperium	0
Certain Conditions Originating in the Perinatal Period	11
Congenital Abnormalities	9
Sudden Infant Death Syndrome	2

Symptoms, Signs, and Abnormal Clinical and lab findings	2
All other Disease (residual)	194
Total Accidents	44
<i>Motor Vehicle Accidents</i>	23
<i>All Other Accidents</i>	21
Intentional Self Harm (Suicide)	19
Assault (Homicide)	9
All Other External Causes	30

Place of Death:

40% of Charles County deaths occurred in a hospital. 15% occurred within a nursing home. 8% were in a hospice. The other county deaths occurred outside of an institution such as a home.

Deaths in Hospitals	Number of Deaths Occurring in Hospitals: All Races	Number of Deaths Occurring in Hospitals: White	Number of Deaths Occurring in Hospitals: Black	Number of Deaths Occurring in Hospitals: Hispanic
<i>Charles County</i>	427	229	183	6

Deaths in Nursing Homes	Number of Deaths Occurring in Nursing Homes: All Races	Number of Deaths Occurring in Nursing Homes: White	Number of Deaths Occurring in Nursing Homes: Black	Number of Deaths Occurring in Nursing Homes: Hispanic
<i>Charles County</i>	162	95	66	1

Deaths in Hospices	Number of Deaths Occurring in Hospices: All Races	Number of Deaths Occurring in Hospices: White	Number of Deaths Occurring in Hospices: Black	Number of Deaths Occurring in Hospices: Hispanic
<i>Charles County</i>	83	63	20	0

Deaths in Institutions	Percent of All Deaths Occurring in Hospitals, Hospice, and Nursing Homes: All Races	Percent of All Deaths Occurring in Hospitals, hospice, and Nursing Homes: White	Percent of All Deaths Occurring in Hospitals, hospice, and Nursing Homes: Black	Percent of All Deaths Occurring in Hospitals, hospice, and Nursing Homes: Hispanic
<i>Charles County</i>	62.0%	59.0%	68.8%	43.8%

Out of the 1085 deaths to Charles County residents in 2016, 920 of those deaths occurred in Maryland (85%). In addition, 714 (66%) of the Charles County deaths occurred within Charles County.

Place of Death	All Deaths	Deaths within Maryland	Deaths within Charles County	Deaths within another Maryland county	Deaths with DC	Deaths in other states or countries
<i>Charles County</i>	1085	920	714	206	131	34

Infant Mortality:

For 2016, Charles County infant mortality rate was much higher than the Maryland state rate. When these rates are compared by race, the rates appear to be higher in the African American population.

2016 Data	Charles County Number	Charles County Rate	Maryland Number	Maryland Rate
Infant Mortality Rate (per 1000 live births)	19	10.5	478	6.5
Neonatal Mortality Rates (per 1,000 births)	15	8.3	340	4.7
Postneonatal Mortality Rates (per 1,000 births)	4	***	138	1.9
Fetal death rates (per 1,000 total deliveries: live births and fetal deaths)	15	8.2	550	7.5
Perinatal Mortality Rates (per 1,000 fetal deaths)	23	12.6	502	6.8

***Rates based on less than 5 events are not presented since such rates are not stable.

2016 Charles County Infant and Fetal Death Rates and Counts	Total	White	Black
Infant Mortality	19 (10.5)	4	13 (14.9)
Neonatal Mortality	15 (8.3)	3	10 (11.5)
Postneonatal Mortality	4	1	3
Fetal Mortality	15 (8.2)	4	9 (10.2)
Perinatal Mortality	23 (12.6)	7 (10.2)	13 (14.8)

Mortality Rates per 1000 live births are presented in parentheses when available. Rates could not be calculated for cells with fewer than 5 deaths.

Infant Mortality Definitions:

Infant death: Death occurring to a person under one year of age.

Neonatal death: Death occurring to an infant under 28 days of age.

Postneonatal death: Death occurring to an infant between 28 days and one year of age.

Fetal death: Death before the complete expulsion or extraction from its mother of a product of human conception, irrespective of the duration of pregnancy.

Perinatal death: Death of a fetus of 28 or more weeks of gestation or of an infant less than 7 days of age.

Vital Statistics References:

1. 2016 Charles County Marriage, Divorce, Mortality and Infant Mortality Statistics. 2016 Maryland Vital Statistics Report. Maryland Department of Health and Mental Hygiene. Available at https://health.maryland.gov/vsa/Documents/2016_Annual_Report.pdf.

Qualitative Data Relating to Vital Statistics:

Infant Mortality was listed as a major health concern at all focus groups within the county. Many improvements have been made to decrease the county’s infant mortality rates through collaborative county programs.

The county’s high mortality due to cancer, stroke, and heart disease were also mentioned as major health concerns at the county focus groups.

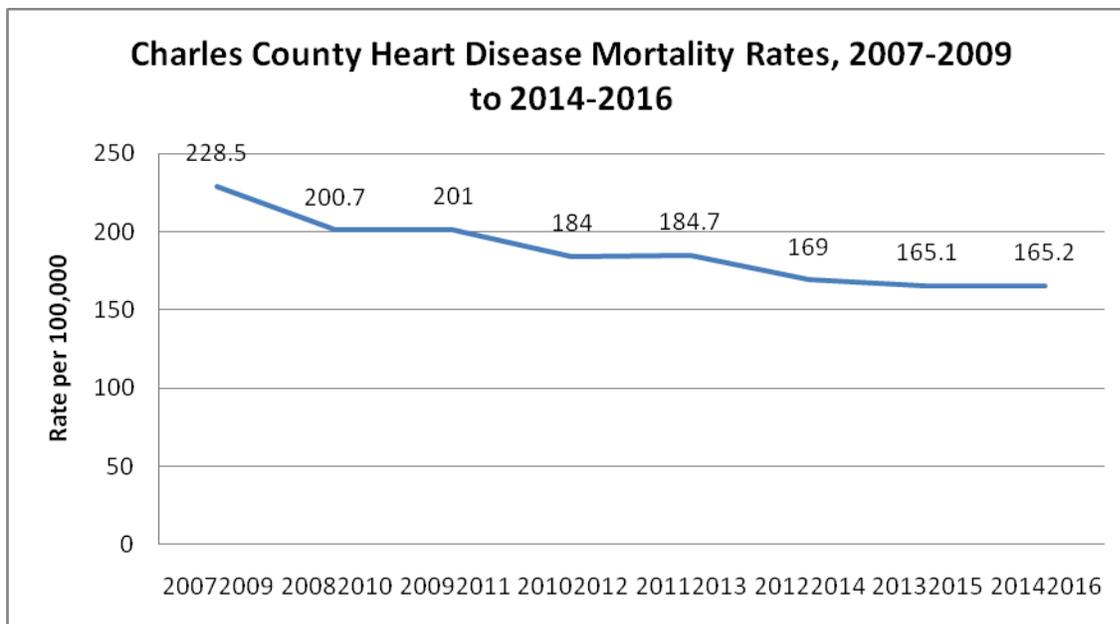
The Burden of Heart Disease, Stroke, and Their Risk Factors:

Heart Disease:

Mortality:

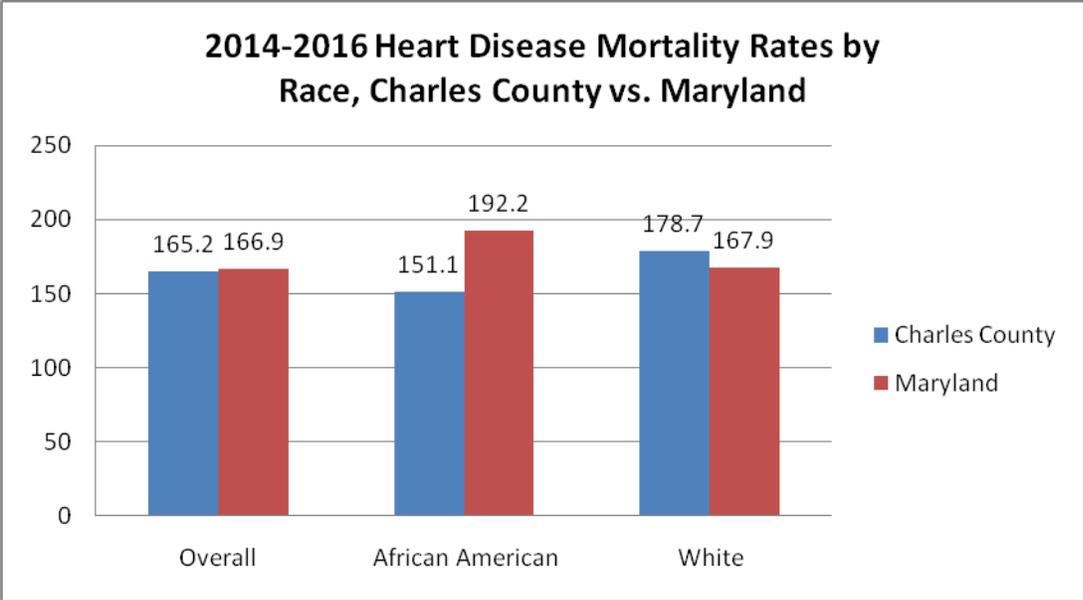
Heart disease is the second leading cause of death in Charles County. In 2016, a total of 347 Charles County residents died from major cardiovascular diseases and 241 of those deaths were from heart disease (69%). This constitutes a 2016 Charles County crude heart disease death rate of 152.8 per 100,000. Deaths due to heart disease made up 22.2% of the total Charles County deaths in 2016.

The 2014-2016 (3 year average) Charles County age-adjusted heart disease death rate was 165.2 per 100,000. This was the highest rate for any cause of death in Charles County. The Charles County heart disease death rate is slightly below than the Maryland state average rate of 166.9 per 100,000. However, this difference is not statistically significant. The Charles County heart disease mortality is the 7th lowest among the Maryland jurisdictions. The 2014-2016 Charles County heart disease mortality rate is a steady decrease from the 2011-2013 Charles County heart disease mortality rate of 184.7 per 100,000.



Racial disparities exist on a county level for heart disease mortality. Charles County Whites have a higher heart disease mortality rate than Charles County African Americans (178.7 vs. 151.1). Due to small case counts, heart disease mortality rates cannot be calculated on a county level for Hispanics and Asians.

The heart disease mortality rate for Charles County African Americans of 151.1 per 100,000 was well below the Maryland African American rate of 192.2 per 100,000. The heart disease mortality rate for Charles County White of 178.7 per 100,000 was however, above the Maryland White rate of 167.9 per 100,000.



Prevalence:

Estimates on the prevalence of coronary heart disease and angina in Charles County can be calculated using the Maryland Behavioral Risk Factor Surveillance System or BRFSS. The BRFSS also provides estimates on the number of Charles County residents who have suffered a heart attack. 2014 BRFSS data is available with weighted responses for the Charles County population. Responses from the 2015 BRFSS did not include estimates on a county level due to small case counts; therefore, 2014 data is the newest available on a county level.

Heart Attack Prevalence:

2014 Charles County BRFSS participants were asked if they have ever had a heart attack. Once weighted, it is estimated that 3.3% of Charles County residents have ever suffered a heart attack. This is similar to the 3.1% reported for Maryland.

Ever had a heart attack:	<i>weighted percentage</i>
<i>Charles County</i>	3.3%
<i>Maryland</i>	3.1%

Angina and Coronary Heart Disease Prevalence:

When asked if a doctor or health professional has ever told them that they have angina or coronary heart disease, 2.7% of Charles County residents reported having angina or coronary heart disease. This is again slightly lower than the 3.2% reported for Maryland.

Ever have angina or coronary heart disease:	<i>weighted percentage</i>
<i>Charles County</i>	2.7%
<i>Maryland</i>	3.2%

Stroke:

Mortality:

Stroke, or Cerebrovascular disease, is the 5th leading cause of death in Charles County. In 2016, a total of 37 Charles County residents died from a stroke. This constitutes a 2016 Charles County crude stroke death rate of 23.5 per 100,000. Deaths due to stroke made up 3.4% of the total Charles County deaths in 2016.

The 2014-2016 (3 year average) Charles County age-adjusted stroke death rate was 26.9 per 100,000. This was the 5th highest rate among causes of death in Charles County. The Charles County stroke death rate is below the Maryland state average rate of 38.4 per 100,000.

Atherosclerosis is the build-up of cholesterol plaque in the walls of arteries causing obstruction of blood flow. Plaques may rupture causing acute occlusion of the artery by clot. In 2016, there were a total of 42 deaths in Charles County due to atherosclerosis. This was the leading cause of death for 2016.

Prevalence:

Estimates on the prevalence of stroke in Charles County can be calculated using the Maryland Behavioral Risk Factor Surveillance System or BRFSS. 2014 BRFSS weighted estimates were used for this analysis. Charles county level data was not available for the 2015 BRFSS; therefore, 2014 BRFSS was used.

2014 Charles County BRFSS participants were asked if they have ever had a stroke. It is estimated that 4.6% of Charles County residents have ever suffered a stroke. This is higher than the 3.1% reported for Maryland for the same time period.

Ever had a stroke:	<i>weighted percentage</i>
<i>Charles County</i>	4.6%
<i>Maryland</i>	3.1%

Hypertension or High Blood Pressure:

Mortality:

Hypertension, or high blood pressure, is the 8th leading cause of death in Charles County. In 2016, a total of 20 Charles County residents died from essential hypertension or hypertensive renal disease. Hypertension deaths make up 1.8% of the total deaths in Charles County (2016).

Prevalence:

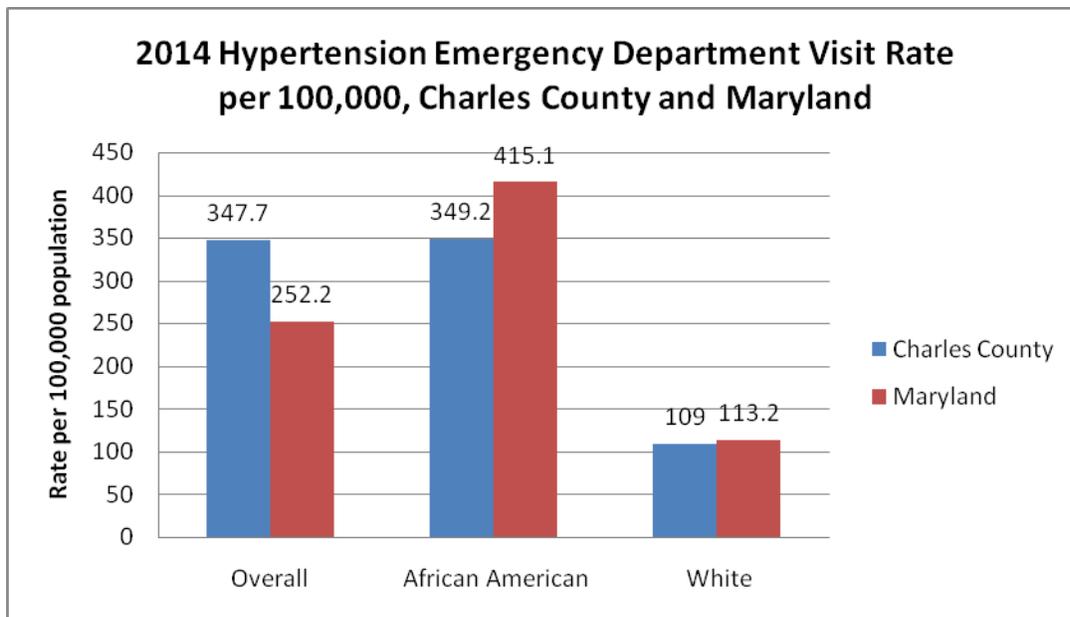
Maryland 2015 BRFSS data was used to determine Charles County’s hypertension prevalence estimates. All percentage estimates are weighted to reflect the county population.

The 2015 BRFSS asked participants if they have ever been told by a health professional that they have high blood pressure. 32.8% of Charles County residents reported that they have been told by a health professional that they have high blood pressure. This is lower than the Maryland percentage of 33.1%.

Emergency Department Visit Rates for Hypertension:

In Maryland, there were 16,251 emergency department visits for primary diagnosis of hypertension in 2014. The 2014 Charles County Emergency Department (ED) Visit Rate for Hypertension was 347.7 per 100,000 population. This rate was higher than the Maryland ED hypertension visit rate of 252.2. The Charles County rate was the 4th highest hypertension ED visit rate among the Maryland jurisdictions. It was also an increase from the 2013 Charles County Hypertension ED visit rate of 308.1 per 100,000 population. Charles County has seen an increase in the hypertension ED visit rate each year starting from a rate of 201.4 per 100,000 in 2008 to 347.7 per 100,000 in 2014.

There are racial disparities in the hypertension ED visit rate in Charles County. Charles County African Americans had a hypertension ED visit rate of 349.2 per 100,000 compared to 109.0 per 100,000 for Charles County Whites.



Heart Disease/Stroke/Hypertension References:

1. 2016 Charles County Heart Disease, Stroke, and Hypertension Mortality Rates, Overall and by gender and race. 2016 Maryland Vital Statistics Report. Maryland Department of Health and Mental Hygiene. Available at: <https://health.maryland.gov/vsa/Pages/reports.aspx>.

2. 2014 Charles County Heart Disease, Heart Attack, and Stroke Prevalence. Maryland Behavioral Risk Factor Surveillance System. Maryland Department of Health and Mental Hygiene. Available at www.marylandbrfss.org.

3. 2015 Charles County Hypertension. Maryland Behavioral Risk Factor Surveillance System. Maryland Department of Health and Mental Hygiene. Available at www.marylandbrfss.org.

4. 2014 Charles County and Maryland Hypertension Emergency Department Visit Rates by race. Maryland State Health Improvement Process website. Available at: <http://ship.md.networkofcare.org/ph/ship.aspx#cat5>.

Qualitative Data Relating to Heart Disease, Stroke, and High Blood Pressure:

On the long community health survey, 26 health issues were listed and participants were asked to rate the severity of those issues in Charles County. The majority of the participants (67.08%) viewed high blood pressure as a health problem in the county. Approximately one-third of the participants (37.01%) listed high blood pressure as a “serious problem.” On the same listing, heart disease was listed as a health problem by 63.15% of the survey participants. One quarter of the participants (29.64%) felt that heart disease was a serious problem in the county. Stroke was listed as a health problem by 56.82% of the respondents. 22.81% viewed stroke as a “serious problem.”

Long survey participants were asked if they have seen improvements in the county on any of 13 listed health topics. 17.44% reported that they have seen improvements in the county regarding heart disease, 12.81% reported that they have seen improvements in the county regarding high blood pressure, and 9.25% reported that they have seen improvements in the county regarding stroke.

Long survey participants were also asked a series of questions regarding risk factors that might increase their chances for chronic disease such as high blood pressure/stroke and heart disease. Some of the risk factors included physical activity, healthy eating, and stress levels. Only 12.45% reported that they always eat 5 or more servings of fruits and vegetables each day; 14.27% always get an hour of physical activity each day; 41.77% take a vitamin each day, and 3.21% never feel stressed out.

Short survey participants were asked what the biggest health problems are in Charles County. High blood pressure/stroke was the 7th most commonly answered health topics on the short survey with 437 listed it as the one of the biggest health problem. 409 people felt that heart disease was one of the biggest health problem in Charles County (8th overall).

Short survey respondents recognized community resources to address heart disease, stroke, and high blood pressure. 40.3% reported that the county had some or many resources for heart disease. 36.8% reported that the county had some or many resources to address stroke. 44.4% felt that the county had some or many resources for high blood pressure.

Heart disease was cited by 34% of key informant interviews as the health condition most affecting Charles County. One interviewee felt that more educational programs are needed in the county to address hypertension and cardiovascular disease.

Heart disease, stroke, and high blood pressure were mentioned as perceived health problems within the county. Many of the county focus groups discussed the overarching goal of chronic disease self management. The Partnerships for a Healthier Charles County's Chronic Disease Prevention Team has developed and executed many programs within the county to educate residents on the identification and self monitoring of chronic conditions. Not only has the team established a Living Well with Chronic Conditions program based on the evidence-based intervention established at Stanford, the team is also implementing the Hypertension Module to specifically target those with high blood pressure. Other programs seen as a strength in the community include the Quality Improvement in Health Systems program that works with 5 primary care practices within the county to use quality improvement models to improve the practice level outcomes for hypertension patients. Additionally, the health department has worked with 4 dental practices to institute blood pressure screenings before all dental cleanings and procedures. It is another opportunity to identify those with hypertension and refer them for treatment before they reach an emergent state.

Focus group participants felt that programs geared toward minorities are necessary to address the racial disparities seen on a county level for chronic disease such as hypertension.

Charles County Cancer Incidence and Mortality: A state and jurisdictional comparison

Introduction:

2016 Maryland Vital Statistics Report:

Cancer is the leading cause of death in Charles County. In 2016, a total of 253 deaths occurred in Charles County from cancer (2016 Maryland Vital Statistics Report).

The 2016 Charles County all-cancer site crude death rate was 160.4 per 100,000 population. This rate is lower than the Maryland state average cancer death rate of 181.5 per 100,000. This rate is an increase from the 2013 Charles County all-cancer site crude death rate of 168.3 per 100,000.

The age-adjusted 2014-2016 Charles County all-cancer mortality rate was 158.3 per 100,000. This was slightly above the Maryland state average rate of 157.4 per 100,000. The Charles County 2014-2016 rate is above the state rate; however, it is a decrease from the 2011-2013 average rate of 184.2 per 100,000. Three year periods are often combined to increase sample size and therefore increase the validity of the mortality rates.

The greatest numbers of cancer deaths were from cancer of the lung, trachea, or bronchus (54) and other sites (77). Lung, trachea, and bronchus cancer accounted for one-fifth of all 2014 cancer deaths. This cancer site was followed by other cancer sites, breast, and colon/rectum/anus.

Charles County Deaths by Cancer Site:	Number of Deaths
Stomach	7
Colon/Rectum/Anus	24
Pancreas	12
Trachea, Lung, Bronchus	54
Breast	29
Cervix, Uteri, Ovary	12
Prostate	12
Urinary Tract	11
Non-Hodgkin's Lymphoma	4
Leukemia	11
Other	77

2017 Maryland DHMH Cigarette Restitution Fund Program's Cancer Reports:

Cancer incidence and mortality data for the time period 2010-2014 and for 2014 only are presented below. Data was extracted from the Cigarette Restitution Fund Program's 2017 Cancer Report. Charles County rates for overall cancer rates, as well as site specific rates, were compared to the United States and Maryland average rates as well as the rates for the neighboring jurisdictions of Calvert and St Mary's counties.

All Cancer Sites Incidence:

2014 Results:

For the year 2014, Charles County had a total of 669 new cases of cancer overall; this corresponds to a 2014 all site incidence rate of 433.0 per 100,000 population. Charles County had the 8th lowest all cancer site incidence rate among the 24 Maryland jurisdictions. This rate is lower than the Maryland average rate and the Calvert County rate; however, it is higher than the rate for St Mary’s County and the US national rate.

When stratified by gender, the Charles County males have generally higher cancer incidence rates than Charles County females. The 2014 all cancer site incidence rate for Charles County males was 493.5 versus 385.2 for Charles County females.

When stratified by race, rates are higher for the White population than the African American population in Charles County. The white all site incidence rate was 496.5, and the black all site rate of 360.4.

When compared with the Maryland state average rate for all cancer site incidences, Charles County males have a higher rate than Maryland males. Charles County females have a lower rate than Maryland females. Charles County African Americans have a lower incidence rate to the rate for Maryland African American males. Charles County Whites have a higher rate than Maryland Whites.

Number of New Cancer Cases for 2014: All Cancer Sites Combined

	Total	Male	Female	White	Black	Other
<i>Maryland</i>	29912	14673	15234	20530	8043	1014
<i>Charles County</i>	669	348	321	444	209	12
<i>Calvert County</i>	500	256	244	412	82	<6
<i>St Mary’s County</i>	474	240	234	394	67	7

S: Case counts were suppressed to prevent disclosure of data in other cells.

2014 All Cancer Site Incidence Rates (per 100,000 population)

	Total	Male	Female	White	Black	Other
<i>Maryland</i>	442.0	481.4	416.3	450.6	443.6	247.4
<i>Charles County</i>	433.0	493.5	385.2	496.5	360.4	**
<i>Calvert County</i>	484.7	526.4	450.3	478.9	563.9	**
<i>St Mary’s County</i>	401.6	412.0	395.3	403.8	393.8	**

** Rates are not calculated for case counts less than 15.

All site cancer incidences rates were also examined for the Hispanic population in Maryland. A total of 875 Hispanic Marylanders were diagnosed with cancer in 2014; this corresponds to an all site incidence rate of 282.0 per 100,000 population. For the Southern Maryland region, there were 23 new cancer cases in the Hispanic population with an all site incidence rate of 258.8 per 100,000. Twelve cases were from Charles County.

2010-2014 Combined Results:

The 10-14 Charles County all site incidence rate was 433.7 per 100,000. This rate is less than the Maryland state average rate of 443.4 and the US average rate of 442.7. The Charles County rate is lower than the Calvert County rate of 460.8 but higher than the St Mary’s County rate of 419.4. For this time period, Charles County has the 8th lowest all cancer site incidence rate among the 24 Maryland jurisdictions for this time period.

Disparities between the White and Black populations in Charles County are seen for the time period 2010-2014. The all site incidence rate for the white population was 444.9 which was higher than the black all site incidence rate of 417.2. The Other Race all site incidence rate was much lower at 222.4 per 100,000. This may be due to small numbers of people in the county who represent the "Other Race" category. This population has been migrating into Charles County in the last decade and tends to be younger. Therefore, they are a small portion of the county's overall deaths and cancer deaths each year.

Cancer still continues to disproportionately affect the male population. From 2010-2014, the Charles County all site incidence rate for males was 499.2 compared to 383.8 for females. Charles County males have a higher all site incidence rate compared to males in Calvert County, St Mary’s County, and Maryland. The Charles County female all cause incidence rate was the 3rd lowest for that category among the 24 Maryland jurisdictions; the Charles County male all cause incidence rate is the 11th lowest in the state.

2010-2014 All Cancer Site Incidence Rates (per 100,000 population)

	Total	Male	Female	White	Black	Other
Maryland	443.4	488.1	413.2	449.3	441.0	255.9
Charles County	433.7	499.2	383.8	444.9	417.2	222.4
Calvert County	460.8	494.9	438.1	465.5	445.0	175.2
St Mary’s County	419.4	440.0	402.2	420.9	411.9	207.1

** Rates are not calculated for case counts less than 15.

All Cancer Sites Mortality:

2014 Results:

In 2014, there were 239 deaths in Charles County attributed to cancer. This constitutes a mortality rate of 169.3 per 100,000. Charles County had the 11th lowest all sites mortality rate among the Maryland

jurisdictions for 2014. This rate is higher than the Maryland state average rate of 161.8 but lower than the St Mary's county rate (185.8) and the Calvert County rate (171.2).

On a county level, Charles County African American experienced slightly lower all site mortality rates than Charles County Whites (170.0 for Whites and 160.1 for African Americans). A disparity is seen on a state level where African Americans have a higher all-site mortality rate than Whites or Asian/PI.

All site mortality rates by gender mirror the same trends as the incidence rates. Males experienced greater all site mortality rates than females. This was true for Charles County, Maryland, Calvert, and St Mary's County. In Charles County, the 2014 all site mortality rate for males was 202.0 compared to 146.3 for females in the county.

Number of Deaths in 2014: All Cancer Site Combined

	Total	Male	Female	White	Black	Other
<i>Maryland</i>	10759	5445	5314	7433	3008	318
<i>Charles County</i>	239	121	118	150	77	12
<i>Calvert County</i>	171	85	86	140	s	<10
<i>St Mary's County</i>	202	106	96	174	s	<10

<10= Case counts were suppressed to prevent disclosure of data in other cells. s = Death counts are suppressed to prevent disclosure of data in other cell(s)

2014 All Cancer Site Mortality Rates (per 100,000 population)

	Total	Male	Female	White	Black	Other
<i>Maryland</i>	161.8	191.5	141.7	160.6	181.0	85.7
<i>Charles County</i>	169.3	202.0	146.3	170.0	160.1	**
<i>Calvert County</i>	171.2	183.0	162.2	165.9	221.6	**
<i>St Mary's County</i>	185.8	210.2	166.2	190.5	180.3	**

** Rates are not calculated for case counts less than 15.

2010-2014 Results:

For the time period 2010-2014, the Charles County all cancer site mortality rate was 184.3 per 100,000. Charles County had the highest rate among the 3 Southern Maryland jurisdictions. The Charles County rate is greater than the Maryland state average rate (165.4 per 100,000). Charles County's rate is the 7th highest all site mortality rate among the Maryland jurisdictions. The Charles County rate falls between 10-25% above the United States national rate (166.1 per 100,000).

The 2010-2014 White all cancer sites mortality rate is lower than the Charles Black rate (182.6 vs. 195.4). The Charles County White all site mortality rate was higher than the Maryland White state average rate

(182.6 vs. 163.2). The Charles County African American all site mortality rate was also higher than the state average rate for African Americans (195.4 vs. 186.2). The Charles County Other Race all site mortality rate was higher than the Maryland Other Race state average rate (113.7 vs. 86.5).

From 2010-2014, males were more likely to die from cancer than females. Charles County males had an all site mortality rate of 221.0 versus 159.3 for Charles County females. The Charles County rates for males and females were slightly higher than Maryland state average rates.

2010-2014 All Cancer Site Mortality Rates (per 100,000 population)

	Total	Male	Female	White	Black	Other
<i>Maryland</i>	165.4	197.8	143.7	163.2	186.2	86.5
<i>Charles County</i>	184.3	221.0	153.3	182.6	195.4	113.7
<i>Calvert County</i>	171.5	210.4	146.5	169.9	192.4	**
<i>St Mary's County</i>	180.2	215.2	149.8	183.4	177.1	**

** Rates are not calculated for case counts less than 15.

Lung/Bronchus Cancer Incidence:

2014 Results:

The 2014 Charles County lung cancer incidence rate was 60.8 per 100,000 population. This is the 11th lowest lung cancer incidence rate in the state of Maryland. The Charles County rate is below the Maryland state average rate of 55.8 per 100,000.

A comparison of county rates by race found that rates for Whites exceeded the rates of African Americans (67.7 vs. 50.7). If you compare White lung cancer incidence rates, Charles County has a higher rate than the Maryland state average rate (67.7 vs. 57.6). Charles County African Americans had a lower rate than the Maryland state average rate (50.7 vs. 56.7).

The incidence of lung cancer was also higher among men than women (67.3 vs. 56.1 in Charles County). Charles County men have a higher rate (67.3) than the Maryland state average rate of 62.8 for men.

Number of New Cases 2014: Lung Cancer

	Total	Male	Female	White	Black	Other
<i>Maryland</i>	3748	1853	1894	2672	970	96
<i>Charles County</i>	89	44	45	62	s	<6
<i>Calvert County</i>	64	31	33	55	7	<6
<i>St Mary's County</i>	70	37	33	64	6	0

S= Case counts were suppressed to prevent disclosure of data in other cells.

2014 Lung Cancer Incidence Rates

	Total	Male	Female	White	Black	Other
<i>Maryland</i>	55.8	62.8	50.6	57.6	56.7	26.0
<i>Charles County</i>	60.8	67.3	56.1	67.7	50.7	**
<i>Calvert County</i>	63.8	68.3	61.1	65.9	**	**
<i>St Mary's County</i>	59.0	62.5	56.0	64.5	**	0

** Rates are not calculated for case counts less than 15.

2010-2014 Results:

Between 2010-2014, the Charles County lung cancer incidence rate was 57.1 per 100,000 population. This rate is similar to the Maryland state average rate (56.6). This rate is lower than the rates for the other Southern Maryland jurisdictions. It is also similar to the United State average rate of 55.8 per 100,000 population.

The lung cancer incidence rate for this time period for African Americans in Charles County is less than the rate for the Charles County white population (47.3 vs. 63.5). The African American lung cancer incidence rate is lower than the Maryland state average rate (56.1). It is similar to the Calvert County rate and lower than the St Mary's County rate. The Charles County white lung cancer incidence rate is higher than the Maryland state average rate (63.5 vs. 58.6) and is lower than the rates in the other Southern Maryland jurisdictions.

The rate of lung cancer incidence in Charles County was much higher for men than women (70.1 vs. 46.7). This difference is significant ($p < .05$). The rate among Charles County females was lower than the state; the rate among males was slightly higher than the state. The highest male lung cancer incidence rate in the Southern Maryland region was St Mary's County; the highest female lung cancer incidence rate in the Southern Maryland region was Calvert County.

2010-2014 Lung Cancer Incidence Rates

	Total	Male	Female	White	Black	Other
<i>Maryland</i>	56.6	64.6	50.7	58.6	56.1	27.0
<i>Charles County</i>	57.1	70.1	46.7	63.5	47.3	**
<i>Calvert County</i>	63.2	71.5	56.3	65.7	49.5	**
<i>St Mary's County</i>	66.1	79.9	54.4	67.2	68.2	**

** Rates are not calculated for case counts less than 15.

Lung/Bronchus Cancer Mortality:

2014 Results:

In 2014, the lung cancer mortality rate in Charles County was 49.0 per 100,000, which is similar to the Maryland state average rate of 48.4 per 100,000. The Charles County 2014 lung cancer mortality rate was higher than the Calvert County rate of 44.3 and lower than the St Mary's County rate of 51.0.

For all jurisdictions analyzed, the lung cancer mortality rate for men was greater than the rate for women. In Charles County, men were 1.9 times more likely to die from lung cancer in 2014 than women.

2014 lung cancer mortality rates for Blacks in Charles County was not available due to small case counts and data suppression. The Charles County White 2014 lung cancer mortality rate was 55.2 per 100,000. On a state level, rates for Whites and Blacks are similar (43.7 for Whites and 40.2 for Blacks).

Number of Lung Cancer Deaths, 2014

	Total	Male	Female	White	Black	Other
<i>Maryland</i>	2750	1399	1351	2014	677	59
<i>Charles County</i>	67	39	28	47	s	<10
<i>Calvert County</i>	44	23	21	38	<10	<10
<i>St Mary's County</i>	55	30	25	46	<10	<10

S= Case counts were suppressed to prevent disclosure of data in other cells.

Lung Cancer Mortality Rates, 2014

	Total	Male	Female	White	Black	Other
<i>Maryland</i>	41.3	48.4	36.2	43.7	40.2	16.5
<i>Charles County</i>	49.0	67.1	36.2	55.2	**	**
<i>Calvert County</i>	44.3	46.9	42.6	46.1	**	**
<i>St Mary's County</i>	51.0	60.6	43.2	50.8	**	**

** Rates are not calculated for case counts less than 15.

2010-2014 Results:

The Charles County 2010-2014 lung cancer mortality rate was 45.9 per 100,000. This rate is slightly higher than the Maryland state average rate of 43.1, but the difference is not statistically significant. The Charles County rate is lower than the other 2 Southern Maryland counties: 48.1 in Calvert and 51.2 in St Mary's. The Charles County lung cancer mortality rate also falls 10% below and 10% above the United State national rate of 44.7 per 100,000.

The Charles County lung cancer mortality rates stratified by gender were higher than the state rates. Charles County men were 1.8 times more likely to die from lung cancer from 2010-2014 than county women. Charles County's rate for men was higher than the state average rate (62.0 vs. 52.0).

When comparing rates by race, Whites in Charles County had a greater rate of lung cancer mortality than African Americans (51.3 vs. 37.8). The lung cancer mortality rate among Charles County whites was higher than the Maryland state average rate, and the lung cancer mortality rate among Charles County African Americans was lower than the Maryland state average rate.

Lung Cancer Mortality Rates, 2010-2014

	Total	Male	Female	White	Black	Other
<i>Maryland</i>	43.1	52.0	36.5	44.3	44.2	18.4
<i>Charles County</i>	45.9	62.0	33.9	51.3	37.8	**
<i>Calvert County</i>	48.1	55.7	42.0	49.3	43.5	**
<i>St Mary's County</i>	51.2	64.0	39.7	51.9	53.9	**

** Rates are not calculated for case counts less than 15.

Colon and Rectal Incidence:

2014 Results:

For 2014, Charles County had a colon and rectal cancer incidence rate of 44.5 per 100,000. This rate is higher than the Maryland state average rate of 37.3 per 100,000. Charles County is the highest among the Southern Maryland counties.

Colon and rectal cancer incidence rates for Charles County males and females are similar for 2014. The Charles County male colon and rectal cancer incidence rate for 2014 was 42.4 per 100,000, which is similar to the Maryland state average rate for males at 42.3. The Charles County female colon and rectal cancer rate is 44.9, much higher than the Maryland state rate of 33.1.

The 2014 Charles County White colon and rectal cancer incidence rate was higher than the Charles County African American rate (53.9 vs. 30.8). The Charles County White colon and rectal cancer incidence rate was much higher than the Maryland state rate as well as the rates of the other Southern Maryland counties. The 2014 Charles County African Americans colon and rectal cancer incidence rate was below the Maryland African American colon and rectal cancer incidence rate.

Number of New Colon and Rectal Cancer Cases, 2014

	Total	Male	Female	White	Black	Other
<i>Maryland</i>	2477	1255	1221	1609	739	107
<i>Charles County</i>	67	30	37	48	16	<6
<i>Calvert County</i>	44	25	19	32	12	0
<i>St Mary's County</i>	33	22	11	28	<6	<6

S= Case counts were suppressed to prevent disclosure of data in other cells.

2014 Colon and Rectal Cancer Incidence Rates

	Total	Male	Female	White	Black	Other
Maryland	37.3	42.3	33.1	35.8	41.8	25.6
Charles County	44.5	42.4	44.9	53.9	30.8	**
Calvert County	43.3	54.4	35.8	37.5	**	0
St Mary's County	27.0	36.6	**	28.1	**	**

** Rates are not calculated for case counts less than 15.

2010-2014 Results:

For the time period 2010-2014, Charles County had a colon and rectal cancer incidence rate lower than the Maryland state average rate and higher than the other Southern Maryland counties. Charles County had a 10-14 Colon and Rectal Cancer incidence rate of 35.9 per 100,000. This rate is between 10-25% below the United States rate of 40.1 per 100,000.

Rates were higher for Charles County men than Charles County women (38.2 vs. 34.0). This difference is not statistically significant. This gender disparity was much bigger for Maryland and the other Southern Maryland counties.

Charles County Whites had a higher colon and rectal cancer incidence rate than Charles County African Americans (37.5 vs. 35.3). Charles County Whites had a higher rate than Maryland Whites, and Charles County African Americans had a lower rate to Maryland African Americans.

2010-2014 Colon and Rectal Cancer Incidence Rates

	Total	Male	Female	White	Black	Other
<i>Maryland</i>	36.7	41.8	32.7	35.3	41.1	25.3
<i>Charles County</i>	35.9	38.2	34.0	37.5	30.9	**
<i>Calvert County</i>	35.7	45.5	28.8	33.1	55.0	**
<i>St Mary's County</i>	32.3	38.8	25.7	34.1	24.0	**

** Rates are not calculated for case counts less than 15.

Colon and Rectal Cancer Mortality:

2014 Results:

The Charles County colon and rectal cancer mortality rate for 2014 was 17.7 per 100,000. This is greater than the Maryland state average rate of 14.4. Rates for Calvert and St Mary's are not available due to small case counts.

Gender and race comparison cannot be done since case counts were too few to calculate mortality rates.

Number of Colon and Rectal Cancer Deaths, 2014

	Total	Male	Female	White	Black	Other
<i>Maryland</i>	955	498	457	638	282	25
<i>Charles County</i>	26	12	14	17	<10	<10
<i>Calvert County</i>	12	<10	<10	<10	<10	<10
<i>St Mary's County</i>	12	<10	<10	<10	<10	<10

S= Case counts were suppressed to prevent disclosure of data in other cells.

2014 Colon and Rectal Cancer Mortality Rates

	Total	Male	Female	White	Black	Other
<i>Maryland</i>	14.4	17.6	12.0	13.8	18.0	6.9
<i>Charles County</i>	17.7	**	**	**	**	**
<i>Calvert County</i>	**	**	**	**	**	**
<i>St Mary's County</i>	**	**	**	**	**	**

** Rates are not calculated for case counts less than 15.

2010-2014 Results:

The 2010-2014 Charles County colon and rectal cancer mortality rate of 17.2 per 100,000 is higher than the Maryland state average rate of 14.5 and the other Southern Maryland counties (15.3 for Calvert and 13.0 for St Mary's County).

Charles County males were more likely to die from colon and rectal cancer than Charles County females (19.7 vs. 15.3). This trend was also seen for Maryland and the other Southern Maryland counties.

2010-2014 Charles County colon and rectal cancer mortality rates for African Americans were higher than the rates for Charles County Whites (24.2 vs. 14.3).

2010-2014 Colon and Rectal Cancer Mortality Rates

	Total	Male	Female	White	Black	Other
<i>Maryland</i>	14.5	17.6	12.2	13.2	19.4	9.0
<i>Charles Co</i>	17.2	19.7	15.3	14.3	24.2	**
<i>Calvert Co</i>	15.6	17.6	14.2	15.8	**	**
<i>St Mary's Co</i>	13.0	17.4	8.7	13.0	**	**

** Rates are not calculated for case counts less than 15.

Breast Cancer Incidence:

2014 Results:

The 2014 Charles County breast cancer incidence rate was 122.3, which was similar to the Maryland state average rate of 130.3 per 100,000. The Charles County rate was higher than the St Mary's County (116.3) and lower than Calvert County, which had a rate of 153.3 per 100,000.

The Charles County White breast cancer incidence rate was 152.8 per 100,000, which was higher than the Maryland state white average rate of 132.8. The Charles County Black breast cancer incidence rate was 91.0 per 100,000, which was lower than the Maryland state average rate of 129.1. The Charles County White breast cancer incidence rate was higher than the Charles County Black rate (152.8 vs. 91.0).

Number of New Breast Cancer Cases, 2014

	Total	White	Black	Other
<i>Maryland</i>	4771	3160	1357	194
<i>Charles County</i>	108	72	33	<6
<i>Calvert County</i>	85	73	s	<6
<i>St Mary's County</i>	72	62	8	<6

S= Case counts were suppressed to prevent disclosure of data in other cells.

2014 Breast Cancer Incidence Rates

	Total	White	Black	Other
<i>Maryland</i>	130.3	132.8	129.1	79.7
<i>Charles County</i>	122.3	152.8	91.0	**
<i>Calvert County</i>	153.3	161.8	**	**
<i>St Mary's County</i>	116.3	122.9	**	**

** Rates are not calculated for case counts less than 15.

2010-2014 Results:

From 2010-2014, Charles County had a breast cancer incidence rate of 126.3. This rate was lower than the Maryland state average rate of 129.2 and the Calvert County rate of 150.2 and higher than the St Mary's County rate of 108.9. It is 10% below to 10% above the US rate of 124.9 per 100,000.

The Charles County White breast cancer incidence rate was 124.4, which was less than the Maryland White state average rate (130.1). The Charles County Black breast cancer incidence rate was similar to the Maryland state average rate (130.4 vs. 128.8) and was higher than the African American rates in the neighboring Southern Maryland counties.

Charles County black women had a higher incidence of breast cancer (130.4) than Charles County white women (124.4) from 2010-2014.

2010-2014 Breast Cancer Incidence Rates

	Total	White	Black	Other
<i>Maryland</i>	129.2	130.1	128.8	82.2
<i>Charles County</i>	126.3	124.4	130.4	**
<i>Calvert County</i>	150.2	160.2	113.6	**
<i>St Mary's County</i>	108.9	112.9	93.3	**

** Rates are not calculated for case counts less than 15.

Breast Cancer Mortality:

2014 Results:

The 2014 Charles County breast cancer mortality rate was 33.0 per 100,000. This rate was higher than Maryland state average rate of 22.9 per 100,000. This was the highest rate among the Maryland jurisdictions with a calculated rate.

Breast cancer mortality rates could not be calculated by race or gender for 2011 due to small case counts.

Number of Breast Cancer Deaths, 2014

	Total	White	Black	Other
<i>Maryland</i>	862	542	297	23
<i>Charles County</i>	28	s	15	<10
<i>Calvert County</i>	19	13	<10	<10
<i>St Mary's County</i>	12	10	<10	<10

S= Case counts were suppressed to prevent disclosure of data in other cells.

2014 Breast Cancer Mortality Rates

	Total	White	Black	Other
<i>Maryland</i>	22.9	21.1	29.3	9.3
<i>Charles County</i>	33.0	**	**	**
<i>Calvert County</i>	**	**	**	**
<i>St Mary's County</i>	**	**	**	**

** Rates are not calculated for case counts less than 15.

2010-2014 Results:

From 2010-2014, Charles County experienced a breast cancer mortality rate of 26.7 per 100,000. The 10-14 Charles County rate is slightly higher than the Maryland state average rate of 22.9 for the same time period, though the difference is not statistically significant. The Charles County rate is higher than the rate for St Mary's County (23.5) and for Calvert County (26.4). The Charles County breast cancer mortality rate is greater than 25% above the United States breast cancer mortality rate of 21.2 per 100,000.

The 10-14 Charles County African American breast cancer mortality rate was 29.4, which was slightly higher than the rate for Charles County Caucasians of 24.8 per 100,000. Rates by race could not be calculated for the other Southern Maryland counties due to small case counts. The Charles County African American breast cancer mortality rate is exactly the same as the Maryland state average rate.

2010-2014 Breast Cancer Mortality Rates

	Total	White	Black	Other
<i>Maryland</i>	22.9	21.0	29.4	8.9
<i>Charles County</i>	26.7	24.8	29.4	**
<i>Calvert County</i>	26.4	25.7	**	**
<i>St Mary's County</i>	23.5	24.2	**	**

** Rates are not calculated for case counts less than 15.

Prostate Cancer Incidence:

2014 Results:

The 2014 Charles County prostate cancer incidence rate was 116.1 per 100,000. This rate is slightly lower than the Maryland state average rate of 119.4. The Charles County incidence rate is higher than the rates in the other Southern Maryland counties (107.3 in Calvert and 72.7 in St Mary's counties).

Disparities are seen for African Americans in terms of prostate cancer incidence. The 2014 Charles County African American prostate cancer incidence rate was 166.8, which was higher than the rate for Charles County Caucasians of 88.4 per 100,000. This disparity is also seen on the state level where Maryland African Americans had a rate of 185.4 and Maryland Whites had a rate of 101.3 per 100,000. The 2014 prostate cancer incidence rates for African Americans could not be calculated for Calvert and St Mary's counties due to small case counts.

Number of New Prostate Cancer Cases, 2014

	Total	White	Black	Other
<i>Maryland</i>	3946	2327	1495	81
<i>Charles County</i>	91	s	48	<6
<i>Calvert County</i>	59	47	12	0
<i>St Mary's County</i>	45	31	14	0

S= Case counts were suppressed to prevent disclosure of data in other cells.

2014 Prostate Cancer Incidence Rates

	Total	White	Black	Other
<i>Maryland</i>	119.4	101.3	184.5	41.0
<i>Charles County</i>	116.1	88.4	166.8	**
<i>Calvert County</i>	107.3	99.7	**	0
<i>St Mary's County</i>	72.7	59.6	**	0

** Rates are not calculated for case counts less than 15.

2010-2014 Results:

The Charles County prostate cancer incidence rate for 2010-2014 was 131.0 per 100,000 population. This rate is only slightly higher than the Maryland state average rate of 125.4; this rate difference is not statistically significant. The Charles County rate was also higher than the other Southern Maryland counties for this time period (109.6 for Calvert and 88.3 for St Mary's). The Charles County rate is between 10 % below and 10% above the United States rate of 119.8 per 100,000.

Disparities are again visible for African Americans. The 2010-2014 Charles County African American prostate cancer incidence rate was 190.7, which was significantly higher than the rate for Charles County Caucasians of 103.4 per 100,000. This disparity is also seen on the state level where Maryland African Americans had a rate of 183.0 and Maryland Whites had a rate of 107.6. The same disparities were also seen for Calvert and St Mary's counties.

The 10-14 Charles County African American prostate cancer incidence rate was higher than the Maryland state average rate and the other Southern Maryland counties. It is the eighth highest rate among the Maryland jurisdictions.

2010-2014 Prostate Cancer Incidence Rates

	Total	White	Black	Other
<i>Maryland</i>	125.4	107.6	183.0	50.1
<i>Charles County</i>	131.0	103.4	190.7	**
<i>Calvert County</i>	109.6	102.0	153.9	**
<i>St Mary's County</i>	88.3	76.7	148.6	**

** Rates are not calculated for case counts less than 15.

Prostate Cancer Mortality:

2014 Results:

For 2014, case counts for Charles, St Mary's, and Calvert counties were too small to calculate prostate cancer mortality rates. The number of case counts is presented in the table below.

Number of Prostate Cancer Deaths, 2014

	Total	White	Black	Other
<i>Maryland</i>	504	307	187	10
<i>Charles County</i>	<10	<10	<10	<10
<i>Calvert County</i>	10	<10	<10	<10
<i>St Mary's County</i>	<10	<10	<10	<10

2010-2014 Results:

The 2010-2014 Charles County prostate cancer mortality rate was 21.2 per 100,000. This rate is similar to the Maryland state average rate of 20.3. The Charles County rate is lower than the Calvert County rate of 28.7 and higher than the St Mary's County rate of 19.7. The county prostate cancer mortality rate is between 10% below and 10% above the United States rate of 20.1 per 100,000.

Disparities are seen for the African American population. Charles County African Americans have a higher prostate cancer mortality rate of 43.9 compared to 14.3 for Charles County Caucasians.

2010-2014 Prostate Cancer Mortality Rates

	Total	White	Black	Other
<i>Maryland</i>	20.3	16.9	36.7	5.0
<i>Charles County</i>	21.2	14.3	43.9	**
<i>Calvert County</i>	28.7	25.2	**	**
<i>St Mary's County</i>	19.7	18.7	**	**

** Rates are not calculated for case counts less than 15.

Note: For three of the remaining cancer sites: oral, melanoma of the skin, and cervical, only 2010-2014 incidence data will be presented. Case counts for 2014 alone were few, and rate calculations could not be performed.

Oral Cancer Incidence:

The Charles County oral cancer incidence rate for 2010-2014 was 10.0. This rate is comparable to the Maryland state average rate of 10.5. The Charles County oral cancer incidence rate is 10-25% below the United States rate of 11.2 per 100,000.

Charles County Whites had a higher oral cancer incidence rate than Charles County Blacks (11.5 vs. 7.2).

Males are disproportionately affected by oral cancer compared to women. The 10-14 Charles County oral cancer incidence rate for males was 13.8, which is significantly higher than the oral cancer incidence rate for women (6.0).

2010-2014 Oral Cancer Incidence Rates

	Total	Male	Female	White	Black	Other
<i>Maryland</i>	10.5	16.0	6.0	11.8	7.6	7.2
<i>Charles County</i>	10.0	13.8	6.0	11.5	7.2	**
<i>Calvert County</i>	14.6	23.0	6.7	14.7	**	0
<i>St Mary's County</i>	11.5	14.3	8.7	11.3	**	0

** Rates are not calculated for case counts less than 15.

Note: For the remaining three cancer sites: oral, melanoma of the skin, and cervical, only 2007-2011 mortality data will be presented. Charles County case counts for 2011 alone were few, and rate calculations could not be performed.

Oral Cancer Mortality:

For 2010-2014, the Charles County oral cancer mortality rate was 3.3 per 100,000. This is higher than the Maryland state average rate of 2.3 per 100,000. The Charles County oral cancer mortality for 2010-2014 was greater than 25% above the US average rate of 2.5 per 100,000.

Even for a combined time period of 2010-2014, deaths due to oral cancer are few, and rate calculations by race and gender were not possible.

2010-2014 Oral Cancer Mortality Rates

	Total	Male	Female	White	Black	Other
<i>Maryland</i>	2.3	3.5	1.3	2.3	2.6	1.1
<i>Charles County</i>	3.3	**	**	**	**	**
<i>Calvert County</i>	**	**	**	**	**	**
<i>St Mary's County</i>	**	**	**	**	**	**

** Rates are not calculated for case counts less than 15.

Melanoma of the Skin Incidence:

2010-2014 Results:

For 2010-2014, the Charles County melanoma cancer incidence rate 19.7 was per 100,000. This rate was less than the Maryland state average rate of 21.4 per 100,000, and it was less than the rates in the other Southern Maryland counties (Calvert 30.6 and St Mary's 26.8). The Charles County rate was 10-25% below the United States rate of 22.3 per 100,000.

The incidence rate for melanoma cancer is higher for Charles County males than females (32.7 vs. 10.0). This rate difference is also seen on the state level for men and women (28.5 vs. 16.4).

A comparison of incidence rates by race can't be done due to small case counts for minorities. However, it should be noted that Charles County Whites had a similar melanoma cancer incidence rate (30.7) than Maryland Whites (30.5). On a state level, Maryland Whites were disproportionately affected by melanoma cancer incidence compared to Maryland African Americans (30.5 vs. 1.0).

2010-2014 Melanoma Incidence Rates

	Total	Male	Female	White	Black	Other
<i>Maryland</i>	21.4	28.5	16.4	30.5	1.0	1.4
<i>Charles County</i>	19.7	32.7	10.0	30.7	**	0
<i>Calvert County</i>	30.6	34.3	29.0	35.5	**	0
<i>St Mary's County</i>	26.8	28.4	25.7	31.4	**	0

** Rates are not calculated for case counts less than 15.

Melanoma of the Skin Mortality:

Mortality rates on a county level are not available due to small case counts. For the state of Maryland, the 2010-2014 melanoma of the skin cancer mortality rate was 2.5 per 100,000. The rates were much higher for males than females (3.9 vs. 1.5), and the rates were much higher for Whites than Blacks (3.3 vs. 0.4).

2010-2014 Melanoma of the Skin Mortality Rate

	Total	Male	Female	White	Black	Other
<i>Maryland</i>	2.5	3.9	1.5	3.3	0.4	**
<i>Charles County</i>	**	**	**	**	**	**
<i>Calvert County</i>	**	**	**	**	**	**
<i>St Mary's County</i>	**	**	**	**	**	**

** Rates are not calculated for case counts less than 15.

Cervical Cancer Incidence:

The 2010-2014 Charles County cervical cancer incidence rate was 4.8 per 100,000, which is below the Maryland state average rate of 6.4. Rates could not be calculated for Calvert County due to a small case count. St Mary's County had a rate of 7.5. The Charles County had a cervical cancer incidence rate that was greater than 25% below the United States rate of 7.4 per 100,000.

A rate comparison by race is not included due to small case counts and the inability to calculate race-specific rates on a county level.

2010-2014 Cervical Cancer Incidence Rates

	Total	White	Black	Other
<i>Maryland</i>	6.4	6.0	7.5	5.2
<i>Charles County</i>	4.8	**	**	**
<i>Calvert County</i>	**	**	**	0
<i>St Mary's County</i>	7.5	**	**	**

** Rates are not calculated for case counts less than 15.

Cervical Cancer Mortality:

Mortality rates on a county level are not available due to small case counts. For the state of Maryland, the 2010-2014 cervical cancer mortality rate was 2.0 per 100,000. The rate was double for Maryland African Americans compared to Maryland Caucasians (2.9 vs. 1.7).

2010-2014 Cervical Cancer Mortality Rates

	Total	White	Black	Other
<i>Maryland</i>	2.0	1.7	2.9	**
<i>Charles County</i>	**	**	**	**
<i>Calvert County</i>	**	**	**	**
<i>St Mary's County</i>	**	**	**	**

** Rates are not calculated for case counts less than 15.

Cancer References:

1. 2016 Charles County and Maryland Cancer Mortality Statistics. 2016 Maryland Vital Statistics Report. Maryland Department of Health. Available at: https://health.maryland.gov/vsa/Documents/2016_Annual_Report.pdf.
2. 2010-2014 and 2014 Charles County and Maryland Cancer Mortality Rates by Site. 2017 Maryland DHMH Cigarette Restitution Fund Program's Cancer Reports. Maryland Department of Health. Available at: [https://phpa.health.maryland.gov/cancer/SiteAssets/Pages/surv_data-reports/2017_CRF_Cancer_Report_\(20170827\).pdf](https://phpa.health.maryland.gov/cancer/SiteAssets/Pages/surv_data-reports/2017_CRF_Cancer_Report_(20170827).pdf).

Qualitative Data Relating to Cancer:

On the long survey, Cancer had the 11th highest percentage of people reporting it as a serious health problem. 64.95% felt that it was a health problem in Charles County on any level, and 34.37% reported it as a "serious problem."

18.51% of long survey participants reported that they have seen improvements in Charles County in terms of cancer. There are many long standing programs for early screening, detection, treatment, and support of cancer.

In regards to health behaviors and risk factors that could increase or decrease county residents' chances of developing cancer, 13.47% smoke cigarettes or cigars, 31.28% are exposed to secondhand smoke at home, 12.45% eat 5 or more servings of fruit and vegetables each day, 11.82% always perform cancer self-exams, 23.39% report always using sunscreen, and 14.27% participate in physical activity each day.

Over one-third of short survey participants (37%) felt that Cancer is biggest health problem in Charles County. 41% of respondents believe that there are some or many resources available in Charles County for cancer.

In focus groups, it was discussed that focus groups for chronic conditions such as cancer need to come up with different ways to reach their audiences besides traditional classroom settings and overcome the barriers that some residents have in getting to these services. They must find new means of transportation or create a classroom that is both in person and online. Videos, online materials, and Skype/FaceTime allow people the option to participate without physically attending.

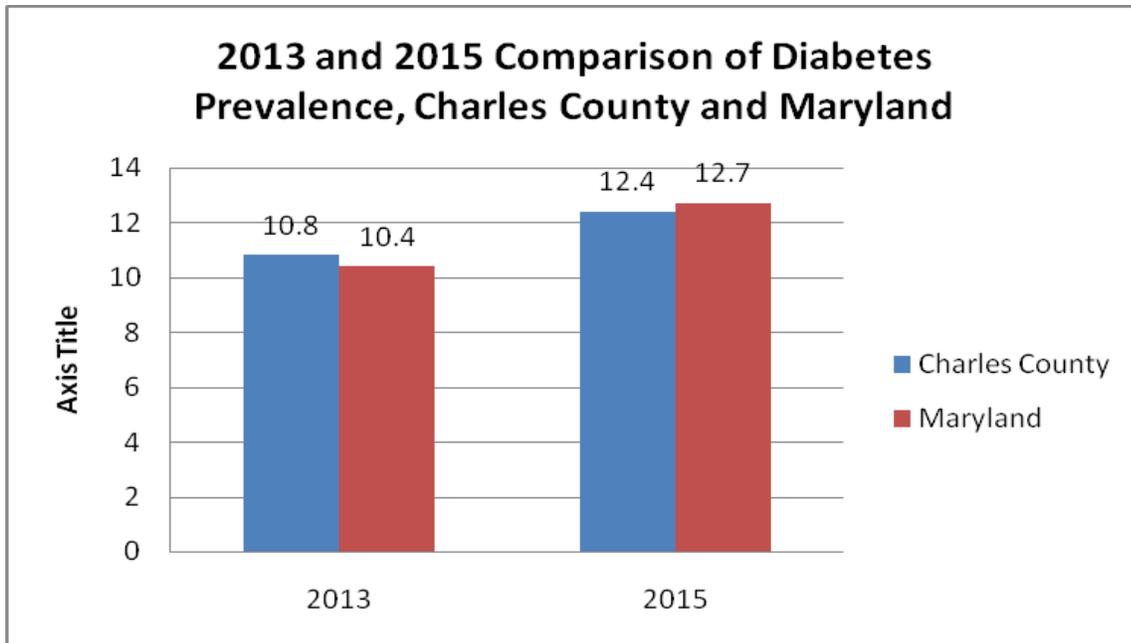
Collaboration and work surrounding cancer initiatives were cited as strengths in the focus groups. Due to health disparities and high county level rates compared to the state, many county programs were formed. Due to strong and successful programs, such as the Charles County Department of Health's Cancer Programs for colorectal cancer, breast cancer, and cervical cancer as well as hospital efforts such as Relay for Life and Paint the Park Pink, the county has seen decreases in cancer rates steadily in the last decade.

Diabetes Mellitus:

Diabetes Prevalence:

2015 Maryland Behavioral Risk Factor Surveillance System (BRFSS) can be used to estimate diabetes prevalence within Charles County and Maryland. Diabetes prevalence percentages have been weighted to reflect the Maryland and Charles County populations.

BRFSS participants were asked the question, “Have you ever been told by a doctor that you have diabetes?” The estimated prevalence of diabetes in Charles County is 10.8%, similar to the state diabetes prevalence of 10.4%. The county diabetes prevalence has decreased by 1.6% from the 12.4% reported in the 2015 community health needs assessment report. This is a positive trend after seeing diabetes prevalence estimates rise slightly each year for several years.



Diabetes Mellitus Death Rates

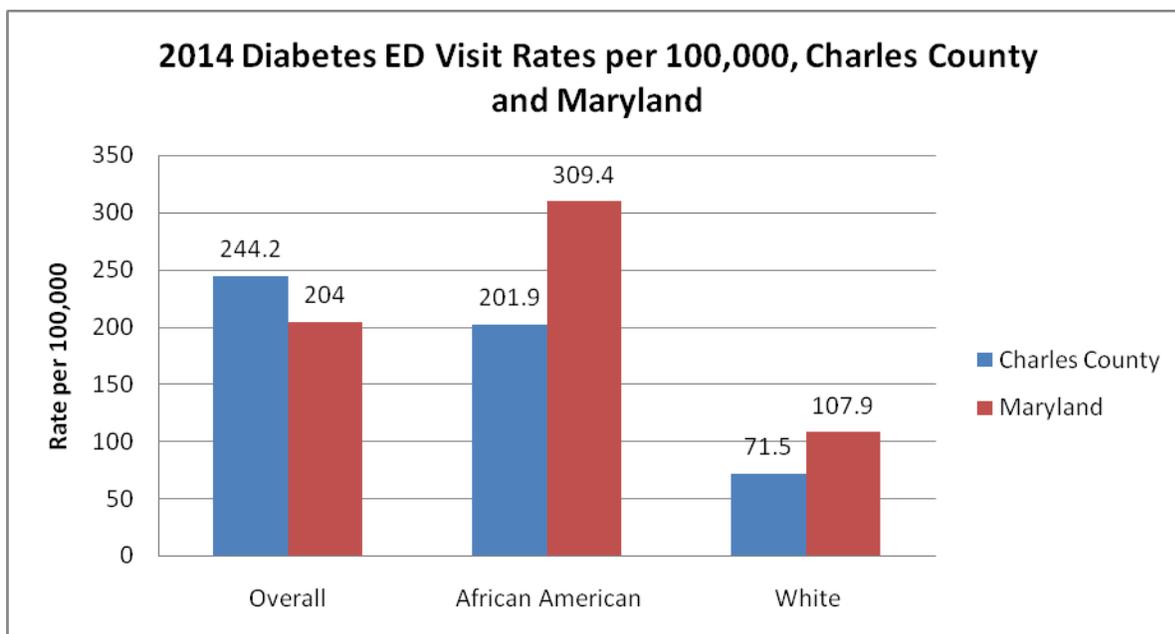
According to the 2016 Maryland Vital Statistics Report, there were 37 deaths in Charles County attributed to Diabetes mellitus in 2016. When comparing the 2016 crude diabetes death rates per 100,000 population, the Charles County rate of 23.5 per 100,000 was slightly greater than the state rate of 22.6 per 100,000 though the difference was not significant. The newest county diabetes death rate is a slight increase from the rate of 22.6 reported in 2015 community health needs assessment report.

Number of Diabetes Deaths and Crude Diabetes Death Rates, Charles County vs. Maryland, 2016		
Jurisdiction	Number of Deaths	Death Rate per 100,000
Charles County	37	23.5
Maryland	1357	22.6

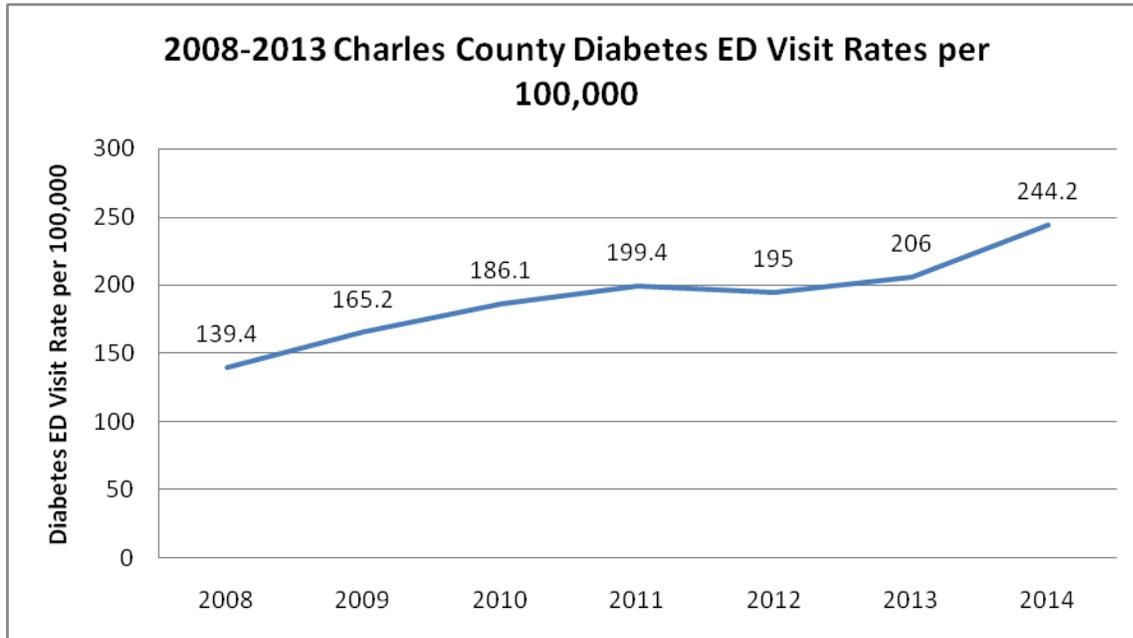
The age-adjusted death rate for Diabetes mellitus for 2014-2016 in Charles County is 24.5 (per 100,000 populations). It is slightly higher than the state diabetes death rate of 19.2 per 100,000, though the difference is not statistically significant. The 2014-2016 Charles County diabetes mortality rate is an increase from the 2010-2013 rate of 22.8 reported in the 2015 community health needs assessment report.

Diabetes Emergency Department Visit Rates:

The 2014 Charles County Diabetes Emergency Department (ED) Visit Rate was 244.2 per 100,000. This rate was higher than the Maryland state average rate of 204 per 100,000. Disparities can be seen on a state and county level where African Americans have a much higher diabetes ED visit rate than Whites. For Charles County, the African American diabetes ED visit rate was 201.9, which was significantly higher than the White rate of 71.5 per 100,000.



Looking at trends over the past 7 years, the Charles County Diabetes ED visit rate has increased from 139.4 in 2008 to 244.2 in 2014.



Diabetes References:

1. 2013 and 2015 Charles County Diabetes Prevalence Data. Maryland Behavioral Risk Factor Surveillance System. Maryland Department of Health and Mental Hygiene. Available at: www.marylandbrfss.org.
2. 2016 and 2014-2016 Charles County Diabetes mellitus mortality counts and rates. 2016 Maryland Vital Statistics Report. Maryland Department of Health and Mental Hygiene. Available at: https://health.maryland.gov/vsa/Documents/2016_AnnualReport.WebVersion.pdf.
3. 2008-2014 Charles County Diabetes Emergency Department Visit Rates. Maryland Health Services Cost Review Commission. Accessed through the Maryland State Health Improvement Process website. Available at: <http://ship.md.networkofcare.org/ph/>.

Qualitative Data Relating to Diabetes:

68.11% of long survey participants felt that diabetes was a health problem in Charles County. Approximately one-third (33.51%) felt that diabetes is a “serious problem” in Charles County. 22.42% of long survey respondents reported that they have seen improvements in Charles County in terms of Diabetes.

Some health behaviors exhibited by Charles County survey respondents that might affect their chances of diabetes included: only 12.45% always eat 5 or more servings of fruits and vegetables each day, 19.1%

always or most of time eat fast food at least once a week, 41.77% always take a vitamin, and 14.27% participate in physical activity each day.

42.6% of the short survey participants felt that Diabetes is the greatest health problem in Charles County. This was the 3rd highest ranking health condition. Additionally, 44% of the respondents felt that there are “many” or “some” services available in Charles County to address diabetes.

Adult Diabetes:

Health professionals in the focus groups expressed concern for Diabetes and the need for more prevention education, especially among those with pre-diabetes. Key informant interviewees also felt that education campaigns and programs need to be in place for chronic conditions, including diabetes.

The cardiac rehabilitation program at the hospital is seeing an increase in individuals with Diabetes (1 out of 5). Their patients are getting younger. Some are fit but are affected by stress, sleep deprivation, and glucose intolerance.

The county has focused on diabetes since the last needs assessment and has put more programs and services in place. The newly established Diabetes Education Center at the University of Maryland Charles Regional Medical Center was seen as a strength and asset to the community. Residents now have a place to go for diabetes education from a certified diabetes educator. The center has also begun conducting a diabetes support group.

In addition, the Chronic Disease Prevention Team has established new, evidence-based based programs such as the Living Well with Chronic Conditions Program and the Diabetes Self Management Program. These classes are free and held throughout the county. Classes are held at different times in the day to accommodate everyone's schedule.

Lastly, in response to the growing issue of pre-diabetes, the Charles County Department of Health, in partnership with Health Partners, Trinity Fitness, and SMECO, has begun offering the CDC's Diabetes Prevention Program. The program has seen tremendous success and interest in its first year.

Juvenile Diabetes:

The county dieticians expressed concern for the younger ages of diagnosis for Type 2 Diabetes. They are seeing youth diagnosed with Type 2 in need of nutrition counseling. Additionally, food services through the Charles County Public Schools are seeing an increase in the number of children with diabetes who must have special dietary planning. School nurses felt that in-roads can be made if education efforts target the parents of children with Diabetes, i.e WeCan Program.

Charles County Asthma Prevalence:

Adult Asthma Prevalence:

Asthma is an emerging health problem in the United States and in Maryland. The problems associated with asthma have been felt at the local level as well. In 2015, approximately 13.9% of adults in Maryland and 11.2% of adults in Charles County have ever been diagnosed with asthma (2015 Maryland BRFSS). An estimated 8.5% of Maryland adults and 7.2% of Charles County adults reported that they currently have asthma (2014 Maryland BRFSS).

Juvenile Asthma Prevalence:

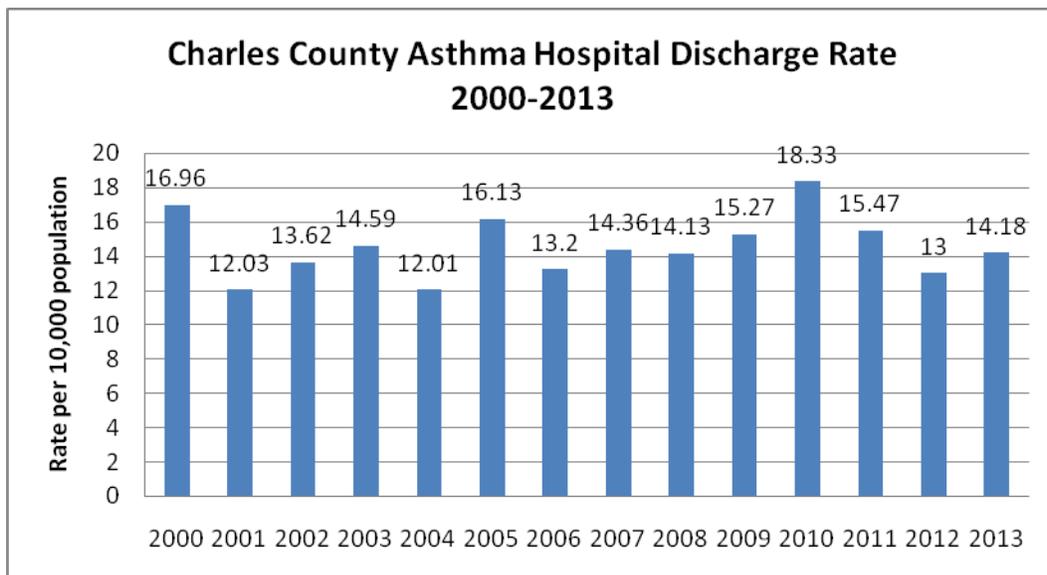
County level data has not been published on juvenile asthma prevalence in the 2014 or 2015 Maryland BRFSS. Therefore, the 2013 BRFSS data is presented below. The 2013 Maryland Behavioral Risk Factor Surveillance System (BRFSS) asks participants if they have any children under the age of 18 who have ever been diagnosed with asthma and if those children still have asthma. Charles County specific data for those questions is presented below.

One in every six Charles County BRFSS participants (17.5%) reported that they have a child who has been diagnosed with asthma.

The majority of those children who were diagnosed with asthma are still currently living with the chronic condition (81.3%).

Asthma Emergency Department and Hospitalization Rates:

The Charles County asthma-related hospitalization rates have fluctuated slightly over the past 14 years. However, the rates have not changed significantly. The most current asthma hospital rate was 14.18 per 10,000 for 2013.

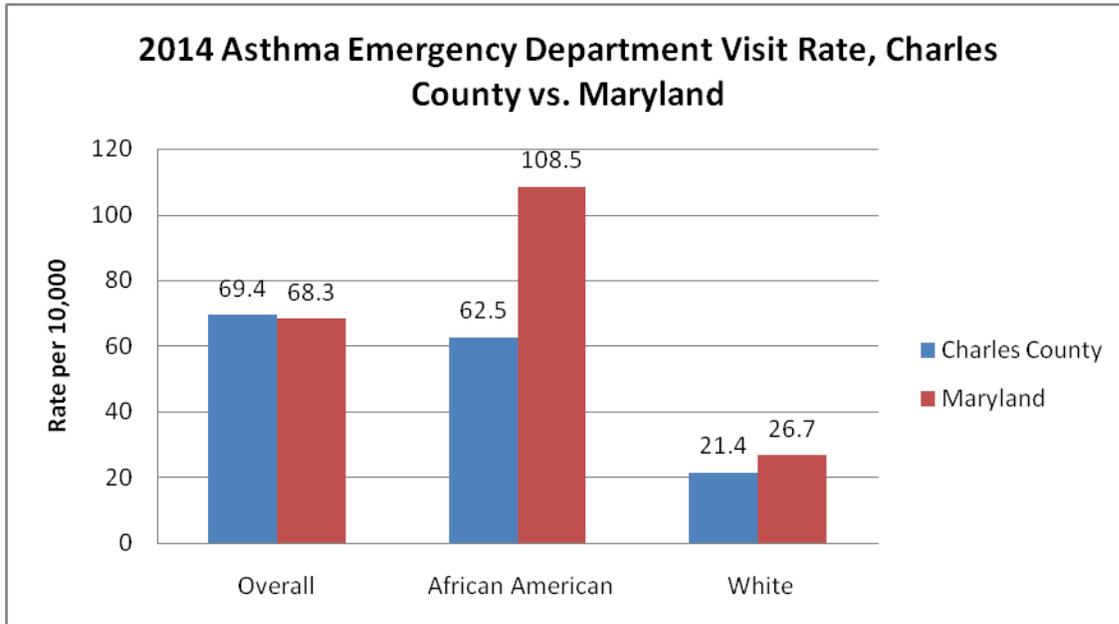


All ages:

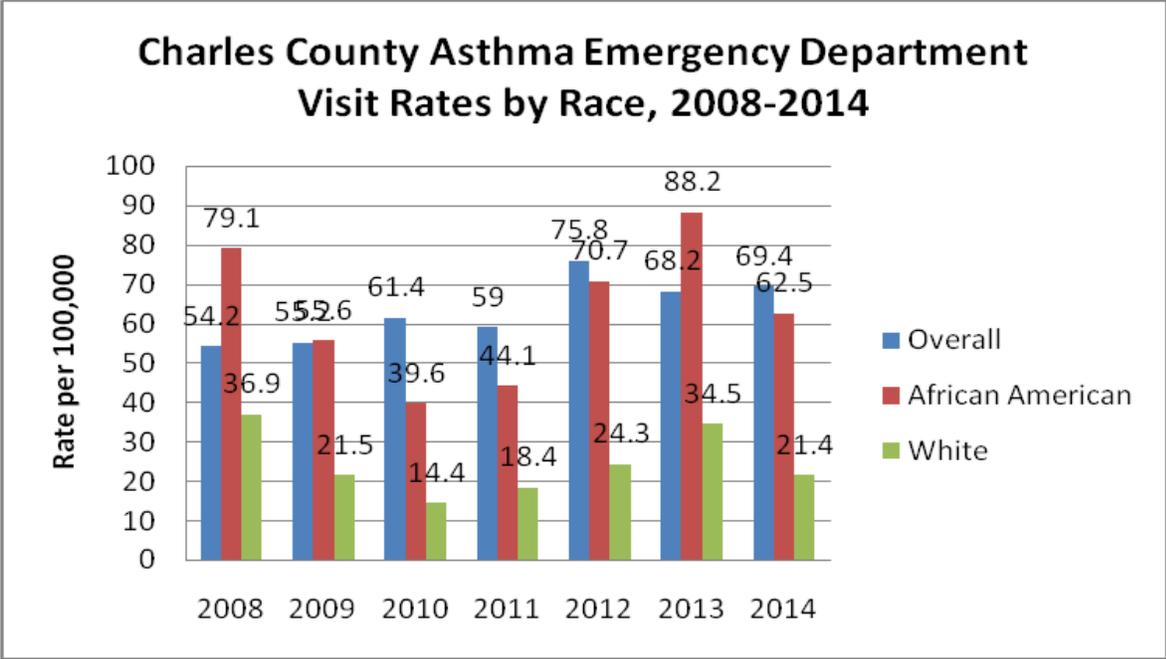
This indicator shows the rate of emergency department (ED) visits due to asthma per 10,000 population in 2014. Asthma is a chronic health condition which causes very serious breathing problems. When properly controlled through close outpatient medical supervision, individuals and families can manage their asthma without costly emergency intervention. In Maryland, there are nearly 50,000 emergency department visit related to asthma each year.

The 2014 Charles County asthma ED visit rate was 69.4 per 10,000 population. This rate is slightly above the Maryland state asthma ED visit rate of 68.3 per 10,000. Racial disparities are clearly seen on the state and county level. Charles County African Americans had a 2014 asthma ED visit rate of 62.5 per 10,000 population. This was significantly higher than the rate for Charles County Whites (21.4).

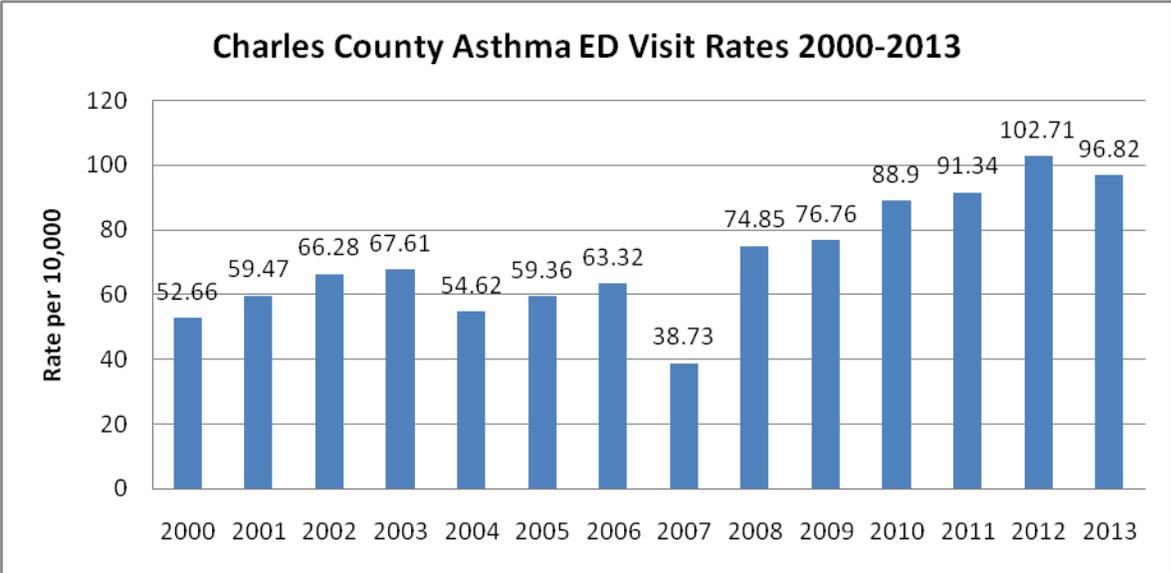
The 2014 Charles County asthma ED visit rate of 69.4 per 10,000 is a small increase from the rate reported in the last needs assessment report of 67.2 per 10,000 for 2013. Additionally, the 2014 Charles County asthma ED visit rate is the 8th highest among the Maryland jurisdictions.



Charles County has seen some increases in asthma ED visit rates since 2010. The 2010 Charles County asthma ED visit rate was 61.2 versus 67.2 in 2013. The Charles County African American population have seen an increase from 95.9 in 2010 to 110.4 in 2013. Charles County Whites have seen a decrease from 38.3 in 2010 to 36.4 in 2013.



Looking at the long term trends in asthma ED utilization from 2000-2013, Charles County has seen some increases in asthma-related ED utilization.



Asthma References:

1. 2014 and 2015 Adult and Juvenile Asthma Prevalence. Maryland Behavioral Risk Factor Surveillance System. Maryland Department of Health. Available at: www.marylandbrfss.org.
2. 2000-2013 Charles County Asthma Hospitalization rates. Maryland Department of Health. Environmental Public Health Tracking Network. Accessed May 24, 2018. Available at: <http://maps.health.maryland.gov/epht>.

3. 2014 Charles County and Maryland Asthma Emergency Department Visit rates for all ages. Maryland Health Services Cost Review Commission. Accessed through the Maryland State Health Improvement Process website. Available at: http://charles.md.networkofcare.org/ph/ship-detail.aspx?id=md_ship17.

4. 2000-2013 Charles County Asthma Emergency Department Visit rates. Maryland Department of Health. Environmental Public Health Tracking Network. Accessed May 24, 2018. Available at: <http://maps.health.maryland.gov/epht>.

Qualitative Data Pertaining to Asthma:

Participants of the disease specific focus group mentioned the increase in both pediatric and geriatric residents with breathing problems such as asthma and COPD. The school nurses also mentioned the increase in asthma cases seen in the schools. There are a great number of children prescribed albuterol for symptoms, but they do not have sufficient follow-up and completed asthma action plans.

Focus group participants and long survey participants mentioned the need for increased specialists in Charles County including pulmonologists. They explained that many individuals have to wait up to a month to be seen.

Short survey participants did not feel that asthma is a significant problem in Charles County. Only 16% of short survey respondents felt that asthma was the biggest health problem in Charles County. This was the third lowest percentage among the listed health conditions. 38% of short survey respondents felt that the county has “many” or “some” services in regards to asthma.

On the long survey, 59% of respondents felt that asthma was a problem on some level in Charles County. 22.01% thought that asthma is a serious problem in Charles County. 7.5% reported that they have seen improvements in Charles County in regards to asthma.

Health of the Aging Population:

Life Expectancy:

The 2014-2016 average life expectancy at birth for a Charles County resident was 79.2 years. The life expectancy is similar for Charles County Whites at 78.9 years and Charles County African Americans at 79.3 years.

Alzheimer's disease:

Mortality:

Alzheimer's is the sixth-leading cause of death nationally and the only cause of death among the top 10 in the United States that cannot be prevented cured or even slowed. In United States, 1 in 3 seniors will die with Alzheimer's or another form of dementia. In 2016, there were 10 deaths in Charles County and 1,178 deaths in Maryland attributed to Alzheimer's disease.

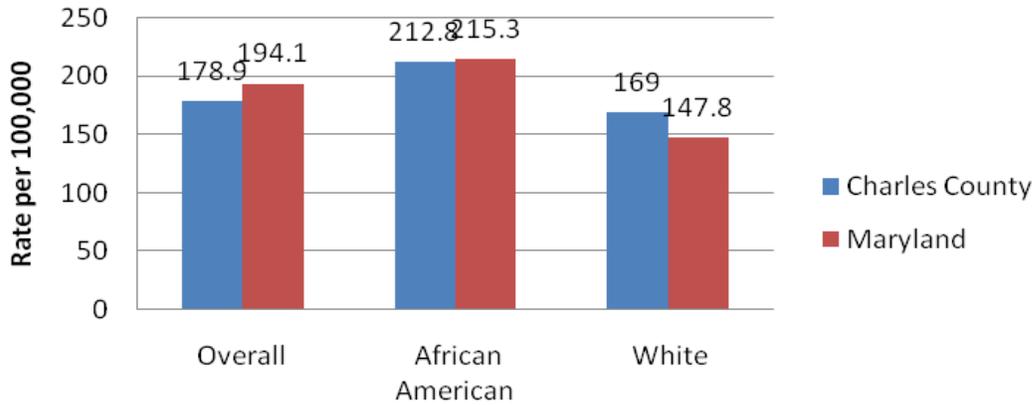
The 2016 crude Alzheimer's disease mortality rate for Southern Maryland was 19.4 per 100,000. This rate was slightly below the Maryland state average rate of 22.6 per 100,000. A Charles County level rate could not be calculated due to small case counts.

The 2014-2016 average age-adjusted Alzheimer's disease mortality rate for Southern Maryland was 19.4 per 100,000. This three-year average rate is more reliable than the 2016 only rate. The 2014-2016 Southern Maryland average rate was higher than the Maryland state average rate of 16.1 per 100,000. A county level rate could not be calculated due to small case counts.

Hospitalizations for Alzheimer's disease and Other Dementias:

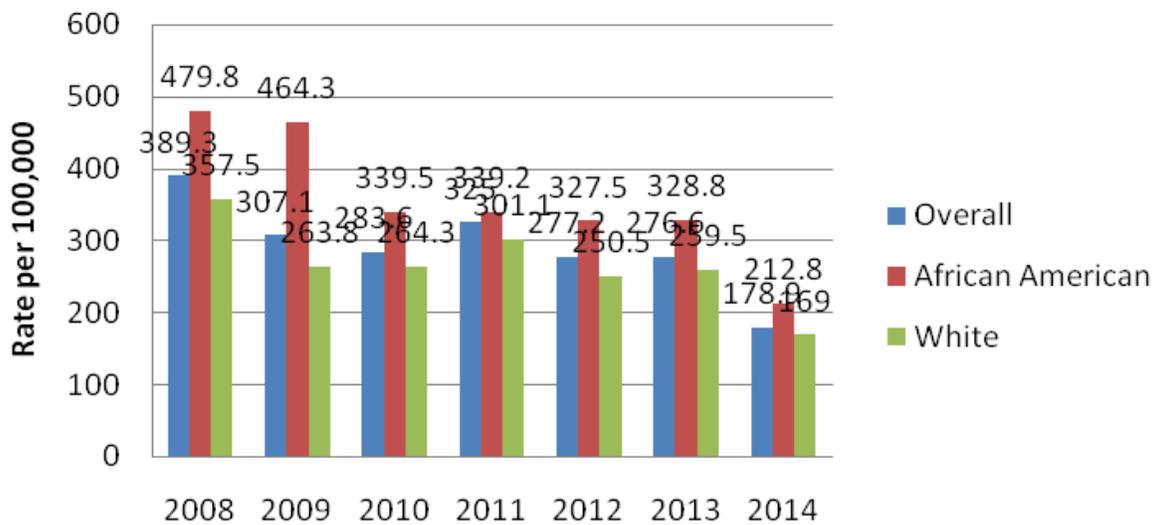
In 2014, the Charles County hospitalization rate for Alzheimer's disease and other dementias was 178.9 per 100,000. This is slightly below the Maryland state average rate of 194.1 per 100,000. Racial disparities are seen on a county level where Charles County African Americans have a slightly higher Alzheimer's disease hospitalization rate than Charles County Whites (212.8 vs. 169.0).

2014 Alzheimer's and Other Dementia Hospitalization Rates by race, Charles County and Maryland



When looking at trends in the hospitalization rates from 2008 to 2014, decreases can be seen. The 2008 Charles County Alzheimer's disease and other dementia hospitalization rate was 389.3 and decreased to 178.9 by 2014. The 2008 Charles County White Alzheimer's disease and other dementia hospitalization rate was 357.5 and increased to 169 by 2014. A smaller increase was seen in the African American population with rates increasing from 263.8 in 2008 to 212.8 in 2014. The Charles County African American Alzheimer's disease hospitalization rate for 2014 was significantly lower than the Maryland rate for this time period and race (212.8 vs. 215.3).

2008-2014 Charles County Alzheimer's and Other Dementia Hospitalization Rates



Arthritis:

It is estimated that 23.5% of Marylanders and 22.3% of Charles County residents are currently living with arthritis (2015 Maryland BRFSS). The 2013 BRFSS contained a module with additional questions surrounding arthritis. 21.8% of Charles County residents with arthritis reported that arthritis or joint symptoms have affected whether they can work, the type of work they do, or the amount of work they do. 91.6% of Charles County residents with arthritis also reported that they have had joint pain in the past month. On a scale of 1-10 with 10 being the most severe pain, most respondents said their pain was between 4-6 out of 10.

Among Charles County residents who reported having arthritis, the majority are not hindered by their arthritis. Nearly 63.8% reported that they can do most things or everything, even with arthritis. 21.8% reported that they can do some things, and 14.4% reported that they can hardly do things. 44% reported having limited activities due to joint symptoms.

Disability and Health Impairment:

The 2015 Charles County BRFSS data estimates that approximately 9.8% of Charles County residents reported that poor physical or mental health kept them from their usual activities. In addition, 4.6% of Charles County BRFSS respondents reported that they have health problems that require them to use special equipment.

The 2014 BRFSS included a module with 5 questions regarding health impairment. 3.1% of Charles County reported that they are blind or have difficulty seeing even while wearing glasses. 3.8% of county residents reported having a difficult time doing errands alone due to a physical, mental, or emotional condition. 6.4% of residents reported that they have serious difficulty concentrating, remembering, or making decisions due to a physical, mental, or emotional condition. 1.5% have difficulty bathing or dressing. 8.8% of Charles County residents reported having difficulty walking or climbing stairs.

Chronic Lower Respiratory Disease Mortality:

In 2016, there was a total of 37 deaths in Charles County and 2073 deaths in Maryland attributed to Chronic Lower Respiratory Disease. The 2016 Charles County Chronic Lower Respiratory Disease (COPD) mortality rate was 23.5 per 100,000. This is lower than the Maryland state average rate of 34.5 and the Southern Maryland regional rate of 31.8 per 100,000.

The 2014-2016 average Charles County COPD mortality rate was 29.7 per 100,000. The three year average rate has an increased sample size leading to increased rate reliability. The 2014-2016 Charles County rate was similar to the Maryland state average rate of 30.2 and was below the Southern Maryland regional rate of 35.0 per 100,000.

Aging Data References:

1. 2016 Charles County Life Expectancy and Alzheimer's disease mortality. 2016 Maryland Vital Statistics Report. Maryland Department of Health. Available at https://health.maryland.gov/vsa/Documents/2016_AnnualReport.WebVersion.pdf.
2. United States Alzheimer's Disease Facts And Figures. National Alzheimer's Association. Available at: www.alz.org.
3. 2008-2014 and 2014 Charles County Alzheimer's disease and other dementia hospitalization rates. Maryland Health Services Cost Review Commission. Accessed through the Maryland State Health Improvement Process website. Available at http://charles.md.networkofcare.org/ph/ship-detail.aspx?id=md_ship35.
4. 2013, 2014, and 2015 Maryland Behavioral Risk Factor Surveillance System. Arthritis Prevalence, Severity, and Management. Maryland Department of Health. Available at: www.marylandbrfss.org.
5. 2014 and 2015 Maryland Behavioral Risk Factor Surveillance System. Disability and Health Impairment Statistics. Maryland Department of Health. Available at: www.marylandbrfss.org.
6. 2016 Charles County Chronic Lower Respiratory Disease Mortality Rates. 2016 Maryland Vital Statistics Report. Maryland Department of Health. Available at https://health.maryland.gov/vsa/Documents/2016_AnnualReport.WebVersion.pdf.

Qualitative Data Pertaining to the Aging:

Disease specific focus group participants reported that they are seeing increases in patients with multiple chronic conditions. They are helping patients to manage many chronic conditions. Patients could benefit from increased education on chronic disease self management in order to reduce the burden of disease emergencies and hospital readmissions for unmanaged disease. Programs, such as the Living Well with Chronic Condition program, were seen as a strength in the community. Another strength cited in focus groups is the establishment of the palliative care program at the University of Maryland Charles Regional Medical Center.

Many programs designed to assist the elderly and aging in Charles County have long waiting lists. The Adult evaluation and referral system (AERS) and MAP have long waiting lists and limited numbers of participants. Sometimes, we must put the individuals in nursing homes to get them on the list for Medicare Waiver Program to try and get them back in their homes. They must go broke in order to qualify.

Other focus groups addressed the complicated health care system and the difficulties the elderly have in navigating the appropriate services. They may not understand what is being told to them or how to set up the appropriate care. Increased care coordination and patient navigation could improve their access to care and services.

Transportation can also be a barrier to care for the elderly. They have limited mobility and abilities to drive and often have to rely on public transportation. Some use the county EMS as a means of

transportation to the hospital for services, even in non-emergent situations. Many focus group participants felt that the county needs more home visiting services and doctors for those who need care in their homes.

Focus groups also discussed the issues surrounding those with mental health conditions who are aging. There are community agencies who cannot service this population. Additionally, they are not accepted into long term care facilities. We have a difficult time finding services and placement for those with co-occurring conditions in the aging population. They don't have cognitive ability to handle living alone. Family members are burnt out. Providers are not located in county. The Ward is in Carroll County and far from family. Some are sent to Baltimore City. Family can't visit. It is problematic.

Focus group participants were worried about the influx of elderly to Charles County. They are choosing to retire here, or they are coming here to live with family. They are coming to the community with multiple chronic conditions and emergent issues. We must handle the emergent situation before directing them to routine care with an established practitioner.

Injury-Related Morbidity and Mortality Data Analysis

Injury-related Mortality:

There are various deaths recorded in the Maryland Vital Statistics Report related to accidental and intentional injuries. Accidents were the third leading cause of death in Charles County and the number one cause of death in individuals under the age of 24 years. In 2016, there were 64 deaths in Charles County and 2282 deaths in Maryland due to accidents. 23 of the Charles County accident deaths were due to motor vehicle accidents. There were also 41 deaths due other accidents, 19 deaths due to intentional self-harm or suicide and 9 homicides.

The 2016 Charles County crude accident death rate was 40.6 per 100,000. This is slightly above the Maryland state rate of 37.9 per 100,000.

The 2014-2016 age-adjusted Charles County accident death rate was 33.0 per 100,000 compared to 30.5 for the state of Maryland. There is no significant difference in the county and state rates.

The 2014-2016 age-adjusted Charles County suicide rate was 4.9 per 100,000 compared to 9.2 for the state of Maryland.

Injury-related Morbidity:

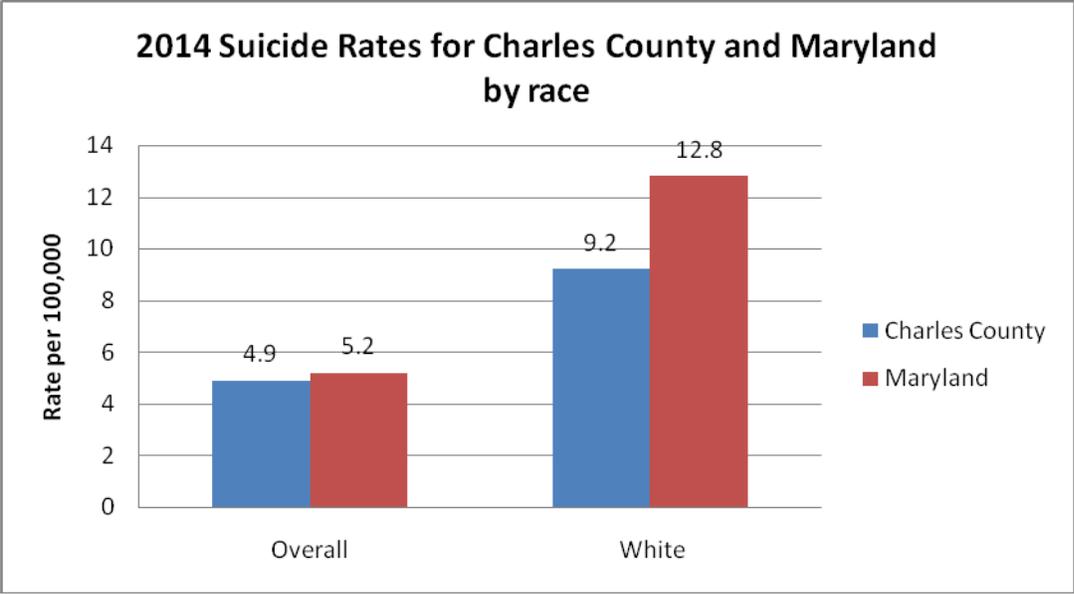
Child maltreatment:

The 2016 Charles County rate of children who were maltreated per 1000 population under the age of 18 years was 4.3. This is below the Maryland state average rate of 6.6 per 1000 population under the age of 18 years.

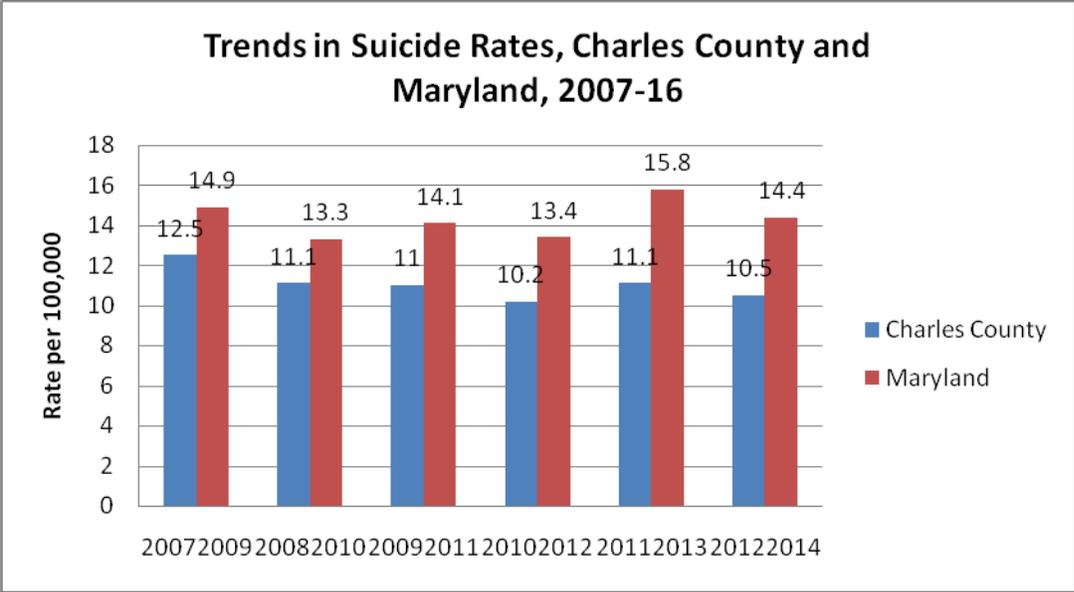
The rate for Charles County fluctuates each year. In 2008, the Charles County child maltreatment rate was 2.6 and rose to 8.5 in 2012. It has since decreased to 4.3 for 2016.

Suicide:

The 2014-2016 average Charles County Suicide rate was 4.9 per 100,000. This was well below the Maryland state rate of 9.2 per 100,000. The Charles County White suicide rate was 5.2 per 100,000 for 2014-2016, compared to 12.8 per 100,000 for Maryland Whites. A Charles County African American rate could not be calculated due to small case counts for this population.



The Charles County suicide rate has seen small and has seen steady decreases since the 2007-2009 average rate of 12.5 per 100,000.

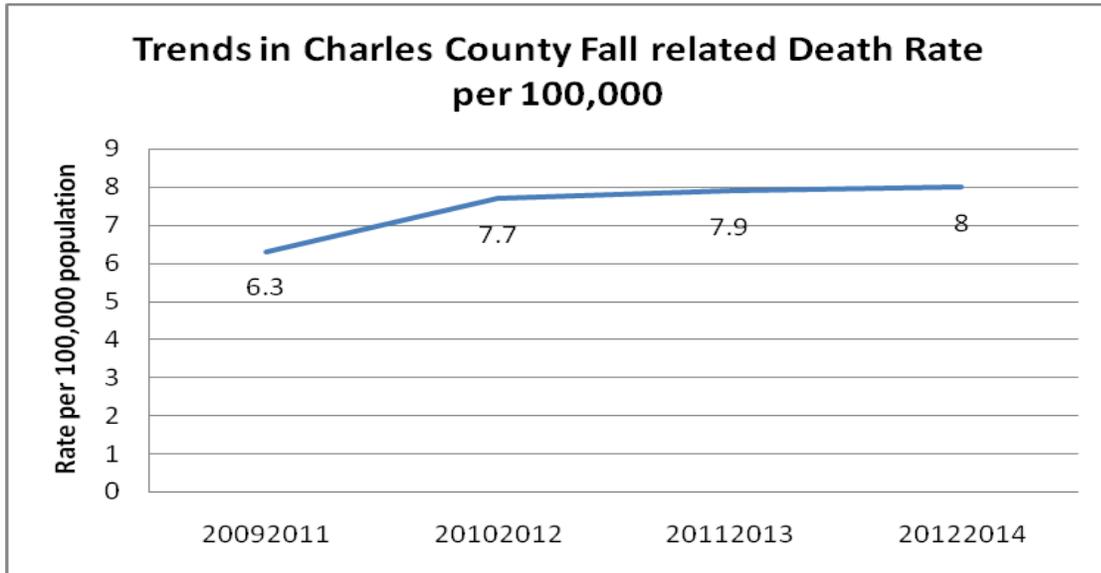


Fall related deaths:

This indicator shows the rate of fall-related deaths per 100,000 population. Falls are a major cause of preventable death among the elderly and have increased across age groups in the past decade. Causes of fall-related deaths differ between the elderly and young and middle-aged populations, and require different prevention strategies. In 2009, falls accounted for 30% of accidental deaths.

The 2012-2014 average Charles County fall-related death rate was 8.0 per 100,000. The 2012-2014 Charles County White fall-related death rate was 9.6 per 100,000.

The 2012-2014 Charles County fall-related death rate of 8.0 was a slight increase from the 2009-2011 rate of 6.3 per 100,000.

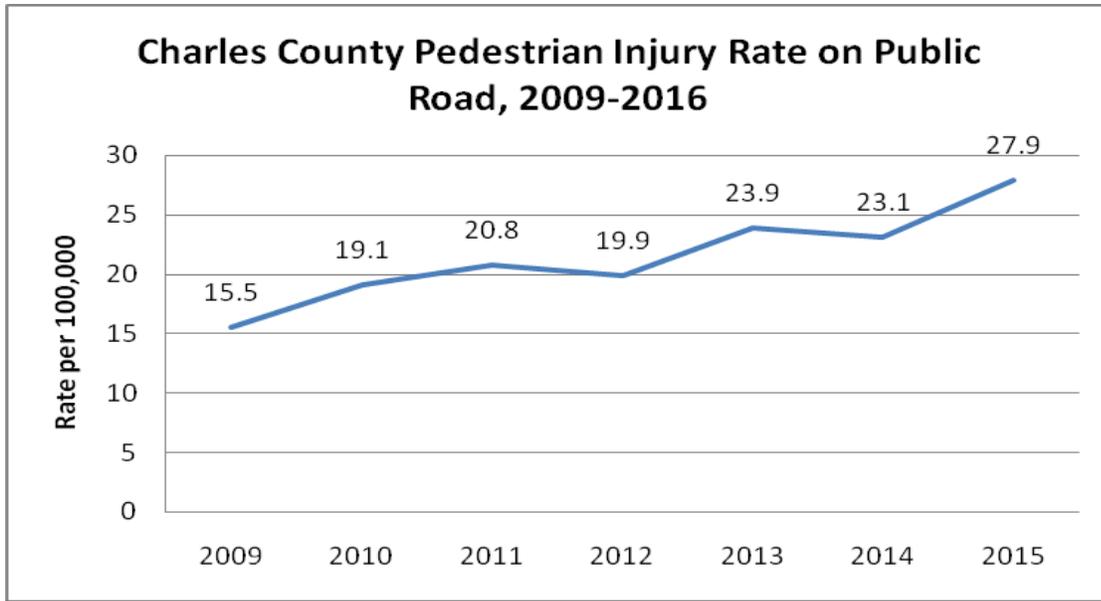


Pedestrian injury rate:

This indicator shows the rate of pedestrian injuries on public roads per 100,000 population. Maintaining pedestrian safety is a key element in preventing motor vehicle injuries and fatalities. There were 2,340 pedestrian injuries in Maryland in 2009. Children are especially at risk for pedestrian injuries and fatalities.

The 2016 Charles County pedestrian injury rate on public roads was 27.9 per 100,000. This is significantly lower than the Maryland state average rate of 58.1 per 100,000.

The Charles County rate has increased slightly each year for the last 5 years of data. The 2009 average rate was 15.5 and has now increased to 27.9 per 100,000 for 2016.



Seat Belt Use:

According to the 2015 Maryland BRFSS, approximately 89.5% of Charles County residents report that they are always compliant with seat belt use. This is slightly below the Maryland state percentage of 91.4%.

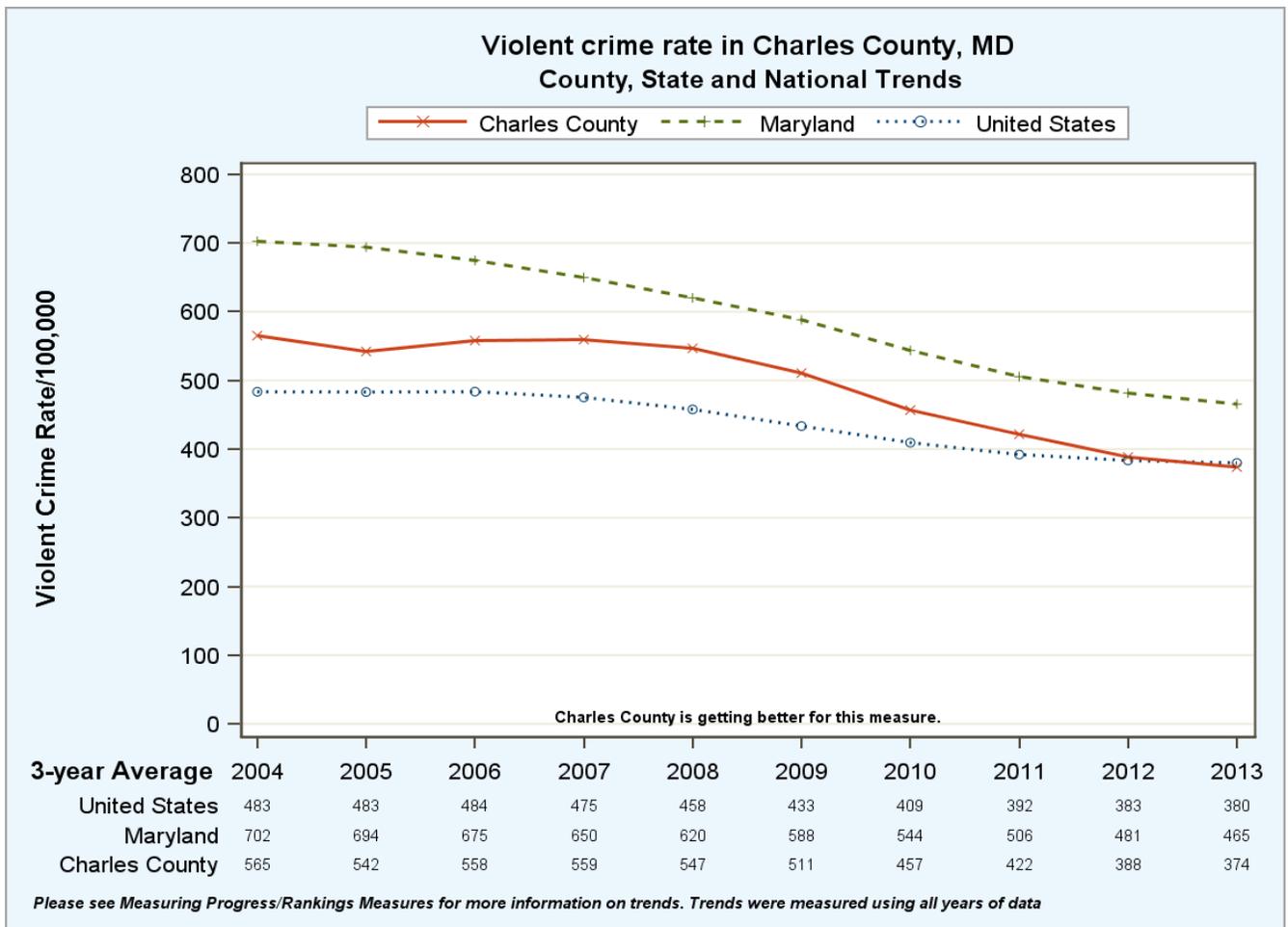
Fall prevalence:

According to the 2014 Maryland BRFSS, 19.2% of Charles County residents and 24.6% of Maryland residents over the age of 45 years have fallen sometime in the past year. 12.4% of Charles County residents reported one fall in the past year.

Among those who reported a fall, 32.3% reported that the fall caused an injury. 23% reported that one fall lead to an injury.

Violent Crime:

The 2012-2014 Charles County violent crime offenses per 100,000 was 374. The Charles County violent crime rate is below both the Maryland and United State average rates of 465 and 380 per 100,000.



Injury Death Rate:

The 2012-2016 number of deaths due to injury per 100,000 in Charles County was 57 per 100,000. There were a total of 439 injury related deaths in Charles County from 2012-2016. The Charles County injury death rate was lower than the Maryland state average rate of 64 per 100,000.

Injury References:

1. 2016 Charles County Injury/Motor Vehicle Accident Mortality Data. 2016 Maryland Vital Statistics Report. Maryland Department of Health. Available at https://health.maryland.gov/vsa/Documents/2016_AnnualReport.WebVersion.pdf.
2. 2016 Child maltreatment data. Maryland Department of Human Resources. Accessed through the Maryland State Health Improvement Process website. Available at: http://charles.md.networkofcare.org/ph/ship-detail.aspx?id=md_ship7.
3. 2007-2016 Charles County and Maryland Suicide Rate. 2016 Maryland Vital Statistics Administration. Accessed through the Maryland State Health Improvement Process website. Available at: http://charles.md.networkofcare.org/ph/ship-detail.aspx?id=md_ship7.

4. 2012-2014 Charles County Fall related death rates. 2016 Maryland Vital Statistics Administration. Accessed through the Maryland State Health Improvement Process website. Available at: http://charles.md.networkofcare.org/ph/ship-detail.aspx?id=md_ship7.
5. 2009-2016 Pedestrian Injury Rate on public roads. Maryland State Highway Administration. Accessed through the Maryland State Health Improvement Process website. Available at: http://charles.md.networkofcare.org/ph/ship-detail.aspx?id=md_ship7.
6. 2015 Seat Belt Use Percentages for Charles County and Maryland. 2015 Maryland Behavioral Risk Factor Surveillance System. Available at: https://phpa.health.maryland.gov/ccdpc/Reports/Documents/MD-BRFSS/2015_MD_BRFSS_County_Level_Data_Tables.pdf.
7. 2014 Fall Prevalence and Severity Data for Charles County and Maryland. 2014 Maryland Behavioral Risk Factor Surveillance System. Available at: www.marylandbrfss.org.
8. 2012-2014 Violent Crime Offenses Rates. Uniform Crime Reporting Program. Accessed through the Robert Wood Johnson Foundation's County Health Rankings. Available at: <http://www.countyhealthrankings.org/app/maryland/2018/measure/factors/43/datasource>.
9. Injury related death rates per 100,000. Compressed Mortality File. Accessed through the Robert Wood Johnson Foundation's County Health Rankings. Available at: <http://www.countyhealthrankings.org/app/maryland/2018/measure/factors/43/datasource>.

Qualitative Data Relating to Traffic Safety and Injury:

On the long health survey, participants were asked the severity of several health issues in Charles County. The community did not perceive injuries as serious problem in the county. Injury received the lowest percentage of people reporting a serious problem. Traffic safety was seen as a “slight” or “moderate” problem.

Health Issue/Condition:	Percent Reporting No Problem in county	Percent Reporting this as a problem at any level	Percent Reporting this as a serious problem
<i>Injuries</i>	6.62	53.24	12
<i>Highway Safety/Traffic Accidents</i>	6.28	78.17	30.97

Survey participants reported improvements in traffic safety in Charles County (13.88%). This was the fourth highest percentage among the health conditions. Injuries reported the lowest percentage of people reporting any improvements (6%).

Health Issues where improvements have been seen	Response Count	Response Percent
Traffic Accidents	39	13.88
Injuries	17	6.05

Long survey behavioral risk factor data related to Traffic Safety or Injury:

- 93.77% always wear a seat belt
- 48.91% always follow road safety rules
- 20.51% always wear a helmet when riding a bike
- 22.25% always wear a helmet when riding an ATV, scooter, or motorcycle
- 14.27% always participate in daily physical activity

Injuries and Traffic Safety scored low on the short survey when participants were asked to choose the biggest health problems in Charles County. 6% felt that injuries were the biggest health problem in Charles County. This was the lowest among the health conditions listed. 17.5% of the short survey participants chose Traffic Safety as the biggest health problem in Charles County. This was the third lowest percentage among the health conditions listed.

Charles County Obesity and Overweight Data:

2015 Charles County adult obesity and overweight prevalence:

2015 Maryland BRFSS data estimates that over two-thirds of Charles County adults are either overweight or obese (76.9%). This is an increase from the 72.1% reported in the previous needs assessment report. Obesity prevalence was determined by weighting Charles County BRFSS BMI responses to reflect the county population. 2015 results found that 32.0% of Charles County adults are obese; and 44.9% are overweight. The Charles County obesity prevalence is higher than the Maryland state average obesity prevalence (32.0% vs. 28.9%). The Charles County overweight prevalence is higher than the Maryland state average overweight prevalence (44.9% vs. 36.1%).

BMI Status: Charles County	Healthy Weight	Overweight or Obese	Overweight	Obese
2015	23.1%	76.9%	44.9%	32.0%
Previous CHNA	27.9%	72.1%	36.8%	35.3%

Childhood Obesity:

High School Students aged 15-18 years:

Childhood obesity statistics on a state and county level are limited. The 2016 Maryland Youth Risk Behavior Survey (YRBS) found that Charles County high school students have a 13.0% obesity prevalence and a 17.2% overweight prevalence. In Charles County, high school females were more likely to be overweight than high school males; however, high school males were more likely to be obese than high school females. The prevalence of overweight and obesity was highest in the 11th grade. Hispanic high school students had a higher prevalence of obesity than any other racial or ethnic group. White high school students had a higher prevalence of overweight than any other racial or ethnic group.

Overweight Prevalence in CC High School Students: 2016 YRBS	Total High School Population (%)	Male (%)	Female (%)
Total	17.2%	15.8%	18.6%
Age			
15 and younger	19.5	18.9	20.1
16-17	16.1	14.0	18.1
18 and older	8.5	--	--
Grade			
9th	21.7	19.5	24.1
10th	17	15.9	18.2
11th	16.4	15.1	17.7

12th	13.8	12.6	15.1
Race/Ethnicity			
Black	18.2	15.7	21.0
Hispanic	13.7	--	14.7
White	16.6	16.5	16.8
All Other Races	11.9	--	--
Multiple Races	12.8	--	14.9

-- Percentages are not calculated due to less than 100 students in a subgroup.

Obesity Prevalence in CC High School Students: 2016 YRBS	Total High School Population (%)	Male (%)	Female (%)
Total	13.0	14.8	11.1
Age			
15 and younger	10.7	11.7	9.6
16-17	14.7	17.8	11.6
18 and older	15.4	--	--
Grade			
9th	11.9	14.7	8.8
10th	10.5	10.7	10.2
11th	16.5	18.9	14.2
12th	13.6	15.6	11.3
Race/Ethnicity			
Black	12.9	14	11.7
Hispanic	18.3	--	16.6
White	12.7	15	10
All Other Races	8.6	--	--
Multiple Races	12.6	--	9.7

In addition, Charles County high school students were asked a number of questions regarding their perceptions of their weight and questions regarding their diet and activities. All of these factors could impact obesity and overweight.

- 25.5% consider themselves slightly or very overweight
- 21.4% did not eat fruit in the past week
- 10.2% did not eat vegetables in the past week
- 13.8% drank soda one or more times a day
- 32.9% were physically active for at least 60 minutes 5 times a week
- 28.1% watched television for 3 or more hours per day
- 39.6% played video games or played on computer 3 or more hours per day

These same questions were also asked of Charles County middle school students on the 2016 YRBS.

- 23.2% describe themselves as slightly or very overweight
- 43.1% are trying to lose weight
- 10.1% did not eat breakfast each day
- 47.3% were physically active at least 60 minutes 5 times a week
- 16.5% did not participate in physical activity at least 1 day a week
- 37.3% watched television for 3 or more hours per day
- 47.2% played video games or played computer for 3 or more hours a day

The State of Obesity report by the Robert Wood Johnson Foundation provides data on low-income children 2-4 years of age in the WIC Program. The 2014 average obesity rate for Maryland children 2-4 years was 16.5% obesity rate. This is the 8th highest obesity rate in the United States. However, the 2014 obesity rate of 16.5% is a drop from 17.1% reported in 2010.

Determinants of Health:

Physical Activity:

Sedentary lifestyle increases risk of obesity, heart disease, hypertension, diabetes, and other chronic diseases and conditions. The Healthy People 2020 objective recommends engaging in moderate physical activity for at least 30 minutes, five or more days a week or vigorous physical activity for at least 20 minutes, three or more days a week for health benefits. Despite the benefits of physical activity, 2015 Maryland BRFSS data found that 79.6% of Charles County residents report leisure time physical activity. This is slightly higher than the Maryland state average percentage of 75.9%.

Leisure Time Physical Activity	Yes, leisure time physical activity	No leisure time physical activity
2015 BRFSS		
Charles County	79.6%	20.4%
Maryland	75.9%	24.1%

High Cholesterol:

An indicator of poor nutrition is high cholesterol. The 2015 BRFSS found that an estimated 37.6% of Charles County residents and 35.9% of Marylanders have been told that their cholesterol is high.

Daily fruit and vegetable consumption:

According to the 2015 BRFSS, 67.4% of Charles County residents reported consuming at least 1 fruit each day, and 80.5% of Charles County residents reported consuming at least 1 vegetable per day.

Daily Fruit and Vegetable Consumption, 2015 BRFSS	Percent who consume at least 1 fruit per day	Percent who consume at least 1 vegetable per day
Charles County	67.4%	80.5%
Maryland	64.0%	78.7%

The 2015 Robert Wood Johnson Foundation’s County Health Rankings calculate a food environment index based on factors that contribute to a good food environment. They calculate a score for each county with 0 being the worst and 10 being the best. For 2015, Charles County’s food environment index was 8.2. This is a fairly strong score based on the fact that 5% of Charles County residents have limited access to healthy foods and 12% food insecurity in Charles County. It is below the Maryland average score of 9.1.

Additionally, the Robert Wood Johnson Foundation calculates the percentage of Charles County residents with access to exercise opportunities. In 2016, 79% of county residents had adequate access to exercise opportunities. This is below the Maryland state percentage of 93%.

Obesity and Overweight References:

1. 2015 Charles County and Maryland Overweight and Obesity Estimates. Maryland Behavioral Risk Factor Surveillance System. Maryland Department of Health. Available at www.marylandbrfss.org.
2. 2016 13-18 year old Charles County and Maryland overweight/obesity Estimates. 2016 Maryland Youth Risk Behavior Survey. Maryland CRF Program. Maryland Department of Health. Available at: <https://phpa.health.maryland.gov/ccdpc/Reports/Pages/YRBS2016.aspx>.
3. 2014 2-4 year old Maryland Obesity Estimates. The State of Obesity Report. The Robert Wood Johnson Foundation. Available at: <https://stateofobesity.org/states/md/>.
4. 2015 Charles County Obesity Health Complication and Risk Factor Data. Maryland Behavioral Risk Factor Surveillance System. Maryland Department of Health. Available at www.marylandbrfss.org.
5. 2015 Charles County and Maryland Food Environment Indexes. Robert Wood Johnson Foundation’s County Health Rankings. Available at: countyhealthrankings.org.
6. 2016 Charles County and Maryland Access to Exercise Opportunities Percentages. Robert Wood Johnson Foundation’s County Health Rankings. Available at: countyhealthrankings.org.

Qualitative Data Relating to Obesity:

Overweight/obesity was seen as one of the biggest and most serious health issue in Charles County on the long survey. The majority of the long survey participants viewed overweight/obesity as a problem on some level (83%). It was also seen as a serious health problem by 50% of long survey participants (second most common response).

11.74% of long survey participants felt that improvements have been made in the county towards combating obesity.

Risk factors reported by long survey participants increasing the rate of obesity include:

1. Only 12.45% always eat 5 or more servings of fruits and vegetables every day. 34% reported that they eat 5 or more servings of fruits and vegetables most of the time.
2. 6.5% always eat fast food at least once a week.
3. 13.7% eat fast food at least once a week most of the time.
4. Only 14.27% always participate in physical activity each day. 64.4% reported that they participate in daily physical activity sometimes or most of the time.

On the short survey, overweight and obesity was seen as the second biggest health problems in Charles County. Nearly half of the respondents (45%) felt that overweight and obesity are a big health issue in Charles County. When asked if services were available in Charles County to address obesity and overweight, only 36% reported that many or some services were available in the county to address the issue.

When asked what they perceive to be the biggest health problem in Charles County, 22% of focus group participants chose obesity. Obesity increases the likelihood of developing other chronic health conditions such as diabetes, arthritis, heart disease, cancer, asthma, injury, hypertension, and stroke. Discussions on obesity, physical activity, and nutrition dominated many of the focus groups.

Childhood obesity continues to be a concern among focus group participants. The Charles County school nurses continue to see obesity as an important health issue among the school aged population. They are seeing children diagnosed with chronic conditions such as Type 2 diabetes at a younger age.

Outside of the school day, county residents are joining local gyms as a family in order to get their overweight children active. Health insurance companies have expanded and will now reimburse gym memberships if you can show a usage log. Gym memberships and prevention are much cheaper than hospitalization and medical costs due to chronic disease. Physical activity is low among youth. Many gyms and trainers are working with obese youth to learn basic movement patterns.

Improvements have been made by food services within the school system to improve the school lunches. These are not the same foods that are in the stores. The pizza is healthier with whole grains and the frosted flakes are not the sugary things you find in the stores. They are dealing with both childhood obesity and hunger. They must encourage them to eat but make healthy choices.

Parks and Recreation expressed the importance of getting the word out about their programs for both children and adults. They are all reasonably priced. However, you can offer all the programs in the world, but you have to get people there. Factors such as time and transportation influence whether families will participate in after school activities. Many of our county residents do not have the time.

Charles County is a bedroom community with many residents who have long commutes into the larger cities, such as Washington DC and Baltimore, for work. After their long commute, they do not want to go back out after dinner for physical activities.

The disease specific focus group participants talked about the presence of healthy options throughout the county. There are farmer's markets available throughout the county, but usage is low. One theory for low usage is because VanGo will only allow passengers to carry 1 bag. Passengers have to limit what they buy to what they can carry.

The College of Southern Maryland has opened micro pantries so that students have access to healthy foods. Many times food pantries carry high sodium foods that are not healthy options.

Focus groups participants talked about the impact of obesity on other co-morbidities. Obesity makes arthritis worse. This can exacerbate behavioral health conditions such as depression and anxiety.

Focus group participants were asked how do we change the culture toward healthy. People need visuals. They need to see that their super size fries are equivalent to a stick of butter. There is a need for healthier food options in convenience stores and local grocery stores. We need to have more recreational opportunities so that we appeal to young families looking to move here. Participants also felt that fundraisers need to have a health focus such as swim night instead of Chick fil a night.

Many participants expressed a need for more education and awareness of county resources and programs to address obesity. People do not know where to go. There was also the discussion that many of the programs were successful in addressing childhood obesity have been discontinued due to lack of funding. The We Can Program, Healthy Stores, and the School Wellness Champions were cited as strengths in the community that successfully implemented behavioral level changes at the population level and in the targeted communities and schools. However, funding has dried up for each of these programs, and they could not be sustained. Additionally, the county currently has no free nutritional or dietary services and counseling. Focus groups participants were concerned that they cannot make any in-roads with families if the education is not readily available.

Lastly, focus group participants expressed their desire for more prevention programs. All current programs are reactive and addresses a person's health after they present with a disease condition.

Charles County Communicable Disease and Environmental Health Data:

The table below shows the incidence for the twelve most commonly reported communicable diseases in Charles County in 2015. The communicable disease with the highest 2015 incidence count was Chlamydia.

Case Counts for Selected Notifiable Conditions Reported in Charles County, 2015

Selected Notifiable Conditions Reported in Charles County, 2015	Case Counts	Incidence Rates per 100,000 population
Chlamydia	722	462.3
Animal Bites	315	201.7
Gonorrhea	132	84.5
Lyme Disease	21	13.4
Aseptic Meningitis	12	7.7
Salmonellosis, other than typhoid fever	16	10.2
Mycobacteriosis, other than TB or leprosy	19	12.2
Primary and Secondary Syphilis	9	5.8
Invasive Group B Strep	9	5.8
Invasive Strep pneumoniae	4	2.6
Vibriosis, Non-cholera	4	2.6
Shigella	6	3.8

Rabies:

No human rabies cases were reported in Charles County from 2010-2017. Charles County has seen a decline in animal rabies cases from 12 in 2010 to 8 in 2017. With such small case counts, it is not uncommon to see fluctuation in counts from year to year. Raccoons and bats are commonly reported animal rabies cases. Case counts from 2010 to 2017 are presented below for overall animal rabies cases, bats, raccoons, and skunks.

2010-2017	2010	2011	2012	2013	2014	2015	2016	2017
Animal Rabies Case Counts for Charles County								
<i>Total Animal Rabies</i>	12	14	14	9	11	5	7	8

<i>Cases</i>								
<i>Bat Rabies Cases</i>	1	0	7	1	1	0	1	3
<i>Raccoon Rabies Cases</i>	7	6	6	3	5	1	1	3
<i>Skunk Rabies Cases</i>	1	1	1	0	3	1	3	0

Influenza Vaccination:

The 2016 percentage of Charles County adults who received a flu vaccination was 38.9%. The Charles County flu vaccination percentage is the 8th lowest in the state of Maryland. It was also lower than the Maryland state average percentage of 43.2%. Charles County Whites had a higher rate of flu vaccination coverage than Charles County African Americans (47.2% vs. 31.2%).

Salmonella Infection Rate:

The Charles County 2011-2013 average salmonella infection rate was 11.5 per 100,000. This is lower than the Maryland state average rate of 14.5 per 100,000. The Charles County salmonella infection rate has remained steady since a 2008-2010 average infection rate of 11.0.

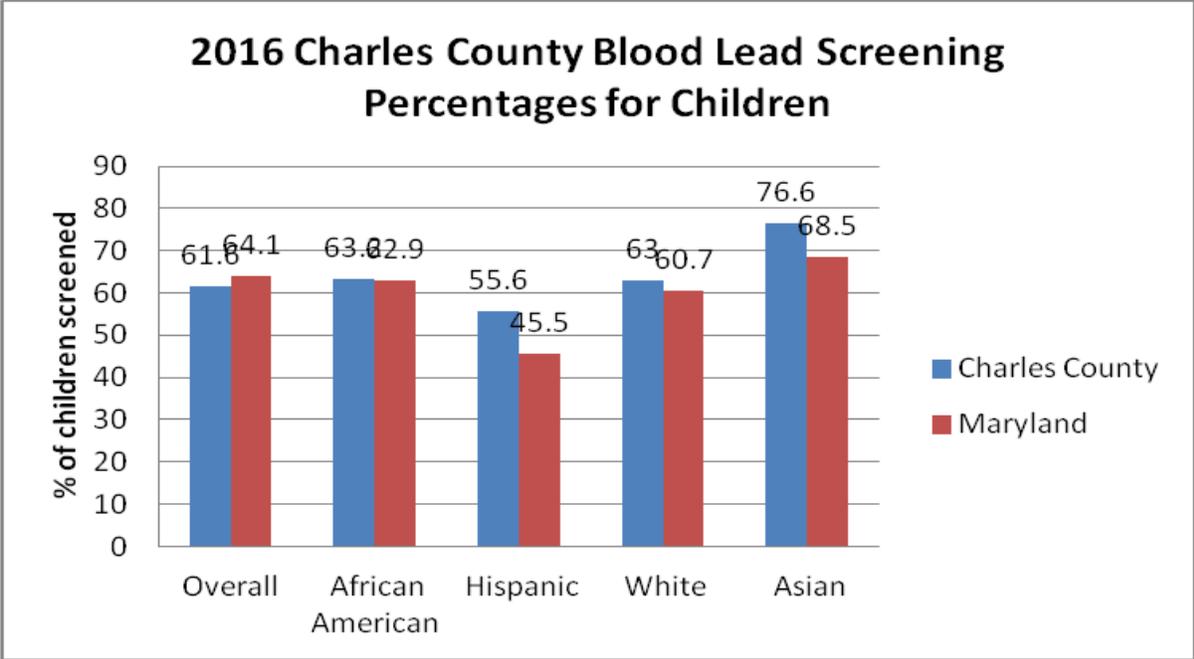
Environmental Health:

Blood Lead Levels:

This indicator reflects the percentage of children (aged 12-35 months) enrolled in Medicaid (90+ days) screened for lead in their blood. Each pediatric Medicaid enrollee should be screened for blood lead during their 12 and 24 month well child visit. Common sources of pediatric lead exposure include dust and paint chips from chipping or peeling lead paint, as well as lead contaminated: soil, toys, water, cosmetics, and folk medicines.

In 2016, 61.6% of Charles County children enrolled in Medicaid had a blood lead screening. This is similar to the state percentage of 64.1%. Blood lead screenings were highest in Charles County Asians (76.6%) and lowest in Charles County Hispanics (55.6%).

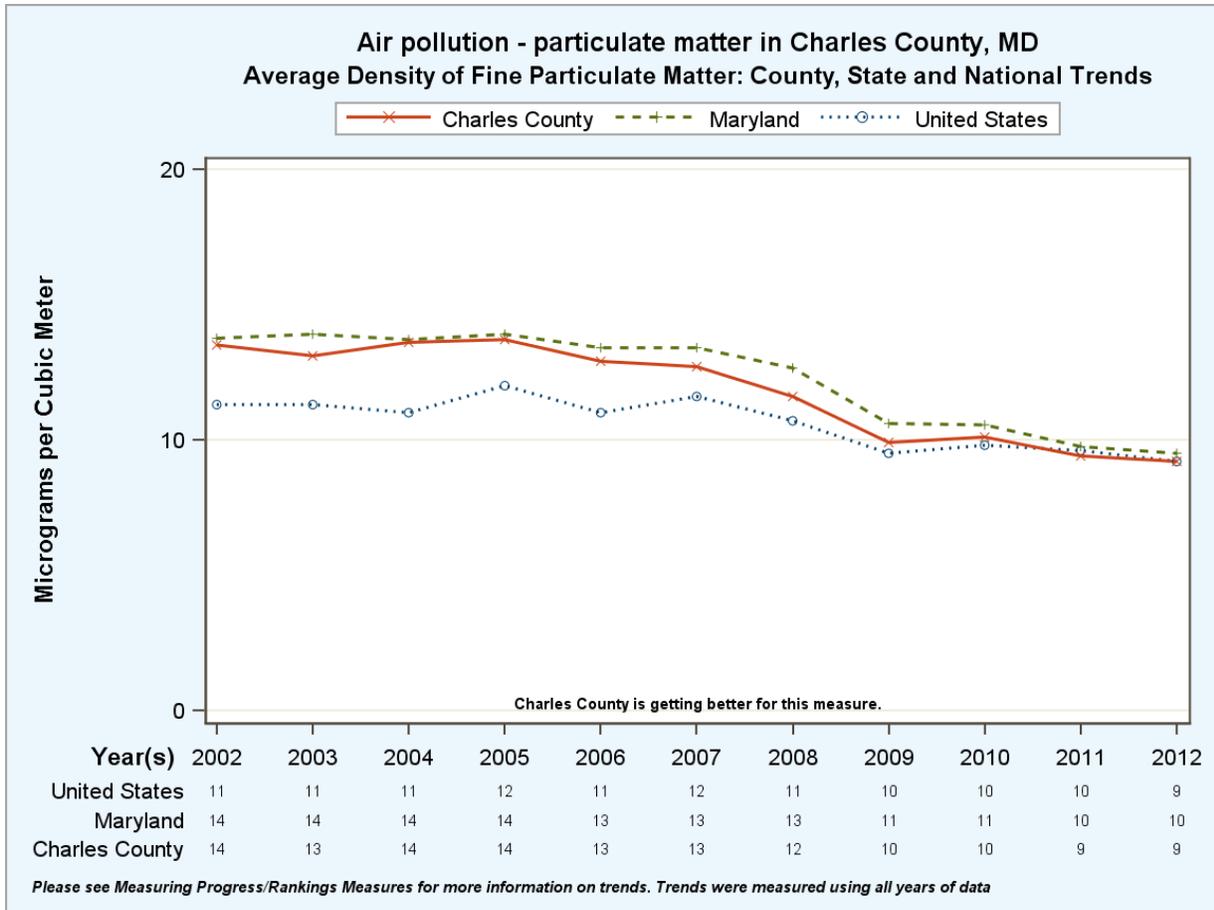
The Charles County blood lead screening percentage has increased from 57.1% of Medicaid children in 2010 to 61.6% in 2016.



Among those screened for blood lead, 0.1% of Charles County children had a blood lead levels greater than 10 mg/dL. This is lower than the Maryland state percentage of 0.3%.

Air pollution: Particulate matter

The 2012 average daily density of fine particulate matter in micrograms per cubic meter in Charles County was 9.2. The county measure has seen a downward trend since 2002.



Communicable Disease and Environmental Health References:

1. 2015 Charles County Reportable Communicable Disease Data. Infectious Disease Bureau. Maryland Department of Health. Available at: https://phpa.health.maryland.gov/Pages/infectious_disease.aspx.
2. 2010-2017 Charles County and Maryland Rabies Data. Infectious Disease Bureau. Maryland Department of Health. Available at: http://phpa.dhmh.maryland.gov/Pages/infectious_disease.aspx.
3. 2016 Charles County and Maryland Influenza Vaccination Rates. Maryland Behavioral Risk Factor Surveillance System and the National Immunization Survey Estimates. Accessed through the Maryland State Health Improvement Process website. Available at: http://charles.md.networkofcare.org/ph/ship-detail.aspx?id=md_ship43
4. 2011-2013 Charles County and Maryland Salmonella Infection Rates. Maryland Department of Health and Mental Hygiene: Infectious Disease and Environmental Health Administration. Accessed through the Maryland State Health Improvement Process website. Available at: http://charles.md.networkofcare.org/ph/ship-detail.aspx?id=md_ship43.

5. 2016 Charles County Blood Screening and elevated blood lead Percentages in Medicaid enrolled children. 2016 Maryland Medicaid Service Utilization data. Accessed through the Maryland State Health Improvement Process website. Available at: http://charles.md.networkofcare.org/ph/ship-detail.aspx?id=md_ship43.

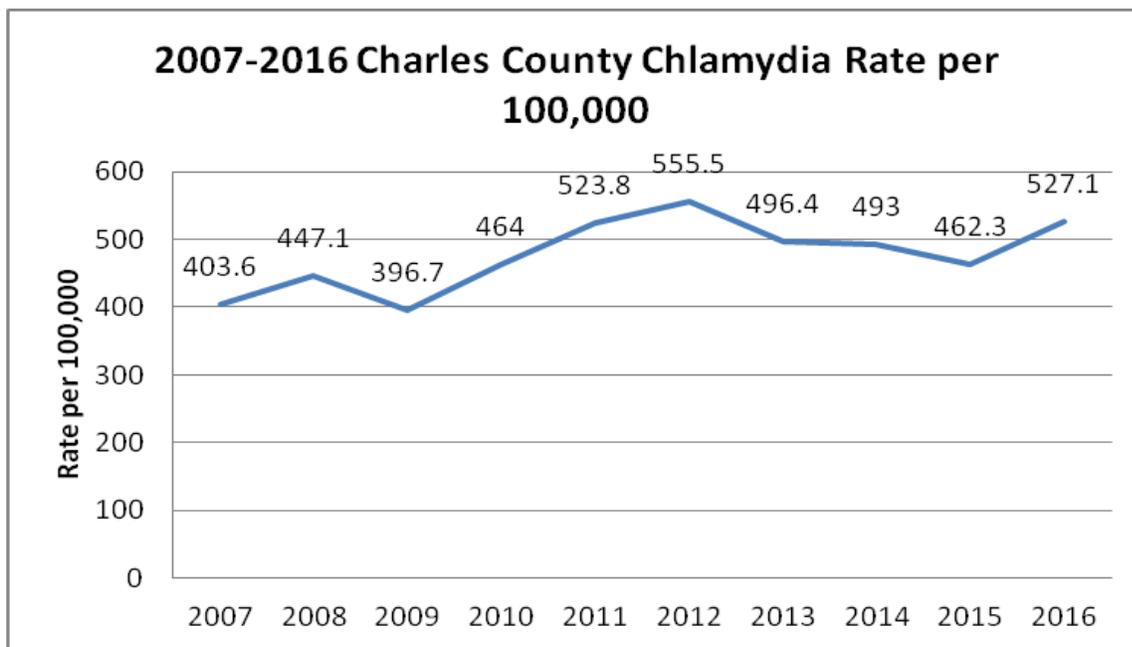
6. 2012 Air pollution data for Charles County and Maryland. Robert Wood Johnson Foundation's County Health Rankings. Available at countyhealthrankings.org.

HIV/AIDS and STI's:

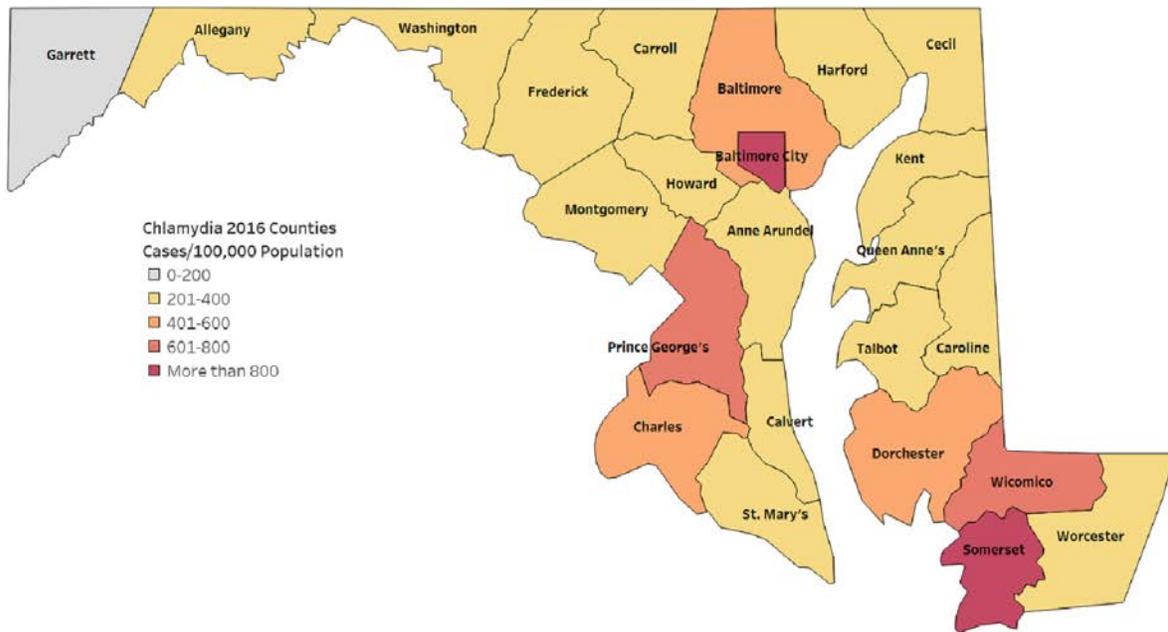
Sexually Transmitted Infections:

Chlamydia:

The STI incidence rates for Chlamydia, Gonorrhea, and Syphilis have all seen increases on the national, state, and local level. Charles County Chlamydia rates are generally below the state average rates. The 2016 Charles County Chlamydia incidence rate was 527.1, which is higher than the 2016 Maryland Chlamydia incidence rate of 509.6 per 100,000. The 2016 Charles County Chlamydia incidence rate is an increase from the 2013 rate of 496.4 reported in the last needs assessment report.



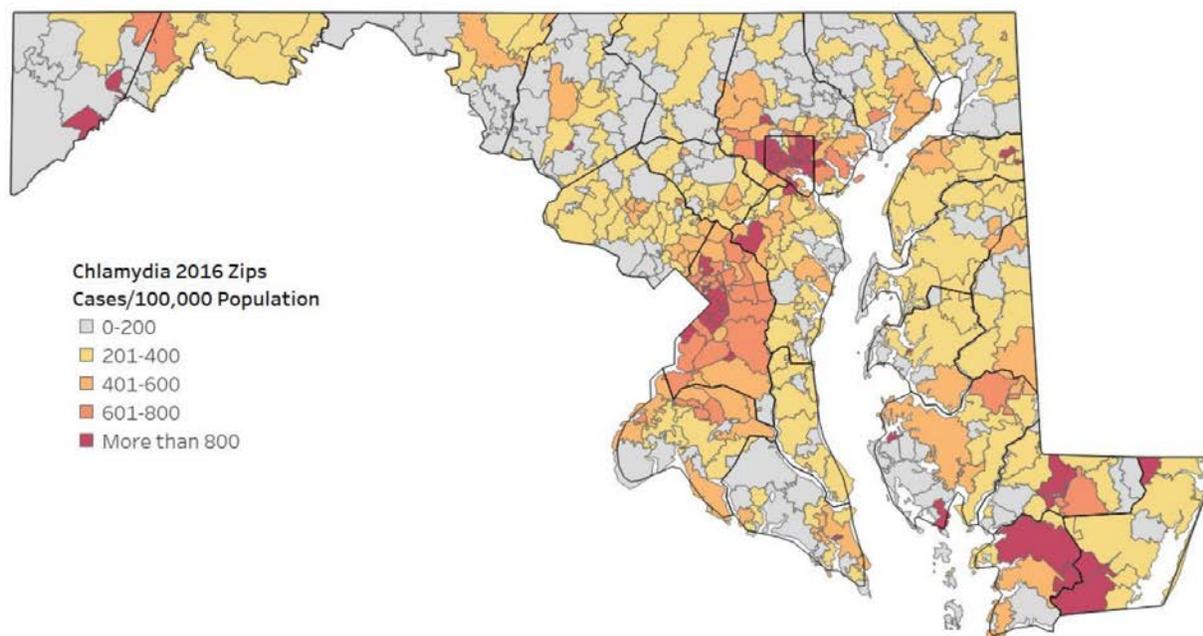
Chlamydia In Maryland
Incidence Rates by County, 2016



Source: Maryland Department of Health. 2016 Epidemiology and Disease Control Programs.

Examining Chlamydia rates by zip code, the highest rates are in the northern parts of county in the zip codes of Waldorf, Bryans Road, and Indian Head.

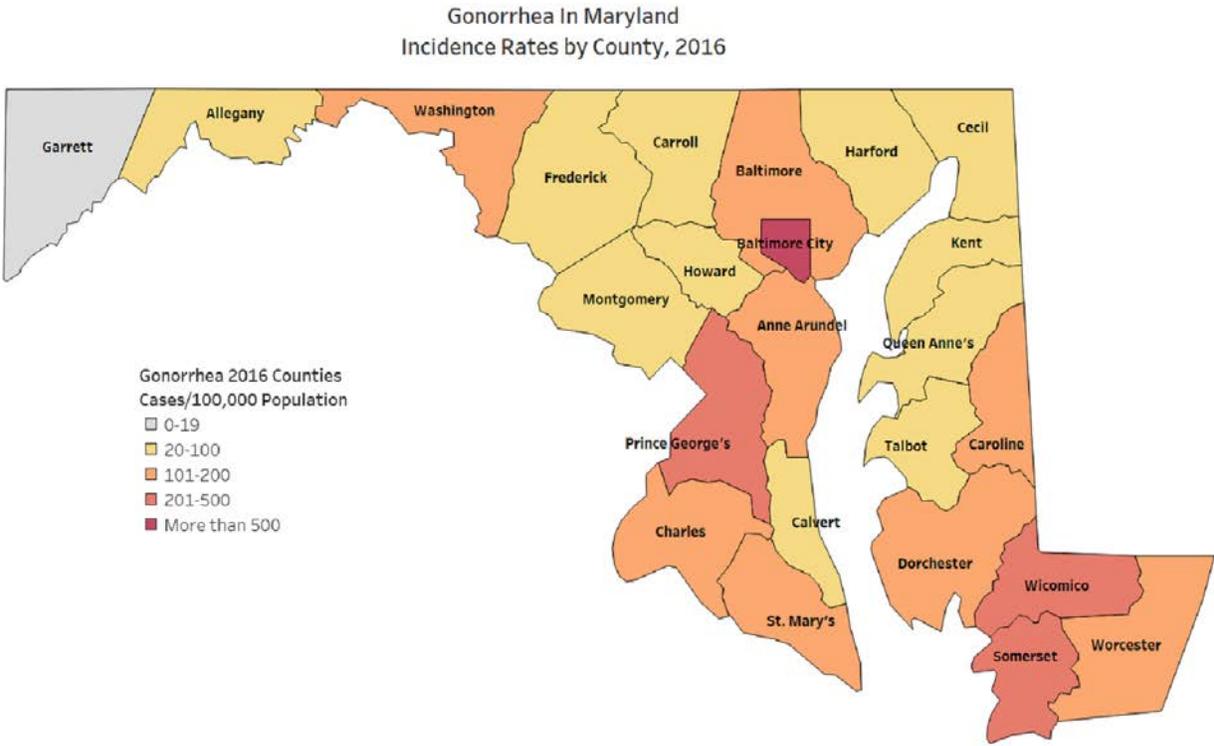
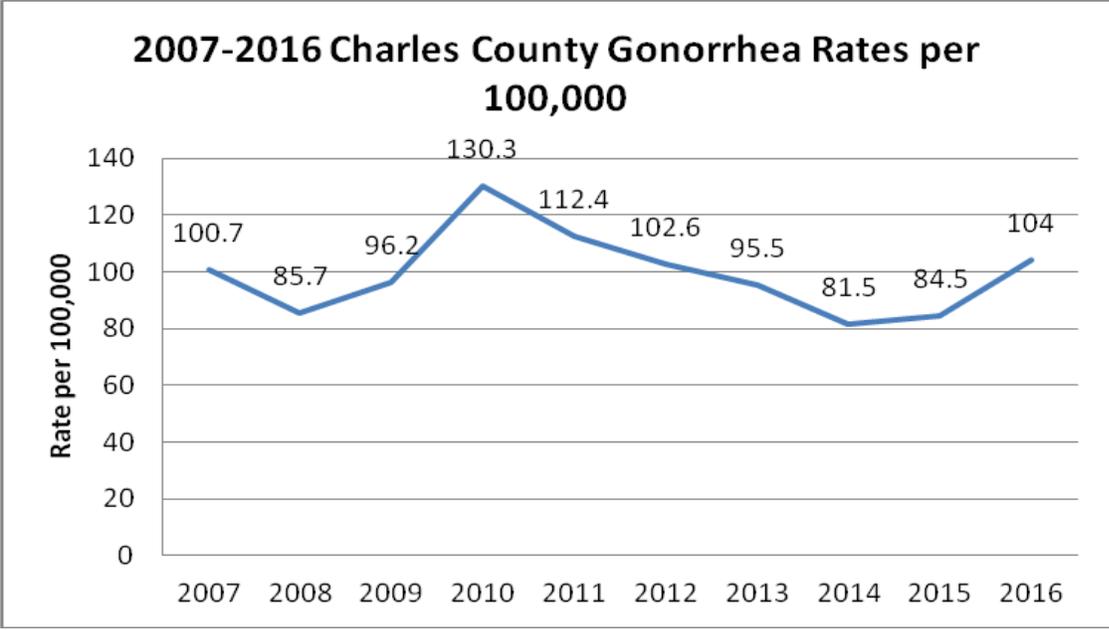
Chlamydia In Maryland Incidence Rates by Zipcode, 2016



Source: Maryland Department of Health. 2016 Epidemiology and Disease Control Programs.

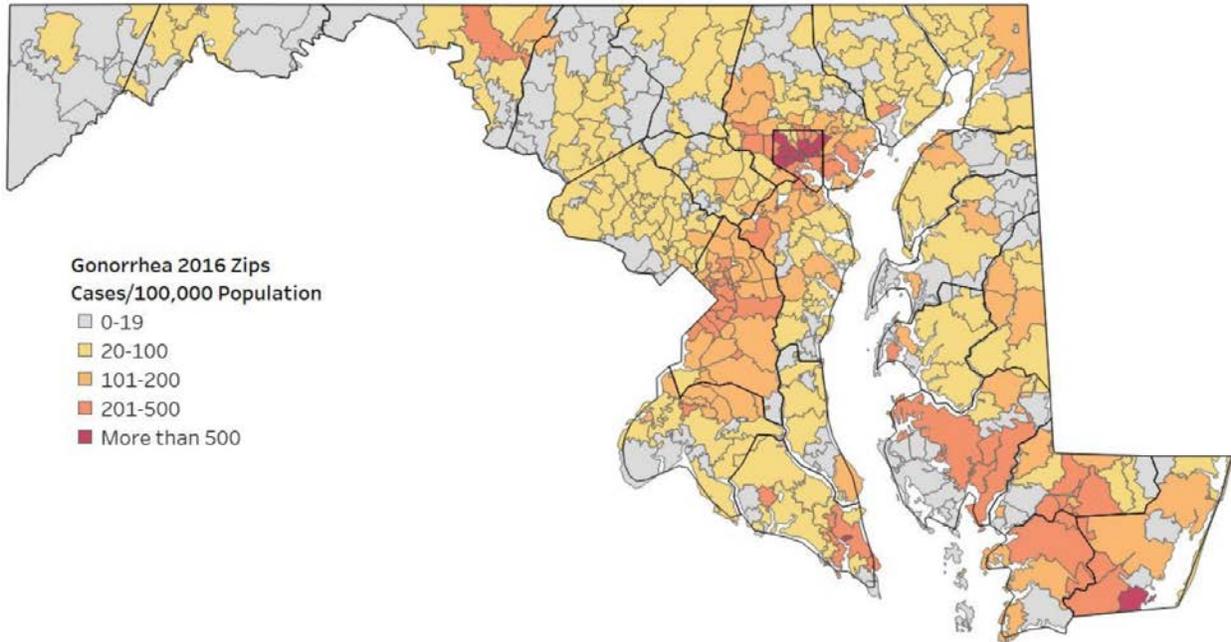
Gonorrhea:

The 2016 Charles County Gonorrhea incidence rate was 104.0, which was slightly below the 2016 Maryland Gonorrhea incidence rate of 158.3 per 100,000. The 2016 Charles County Gonorrhea incidence rate is an increase from the 2013 county rate of 95.5 reported in the last needs assessment report.



Like Chlamydia, the greatest rates of gonorrhea in Charles County are located in the northern part of the county.

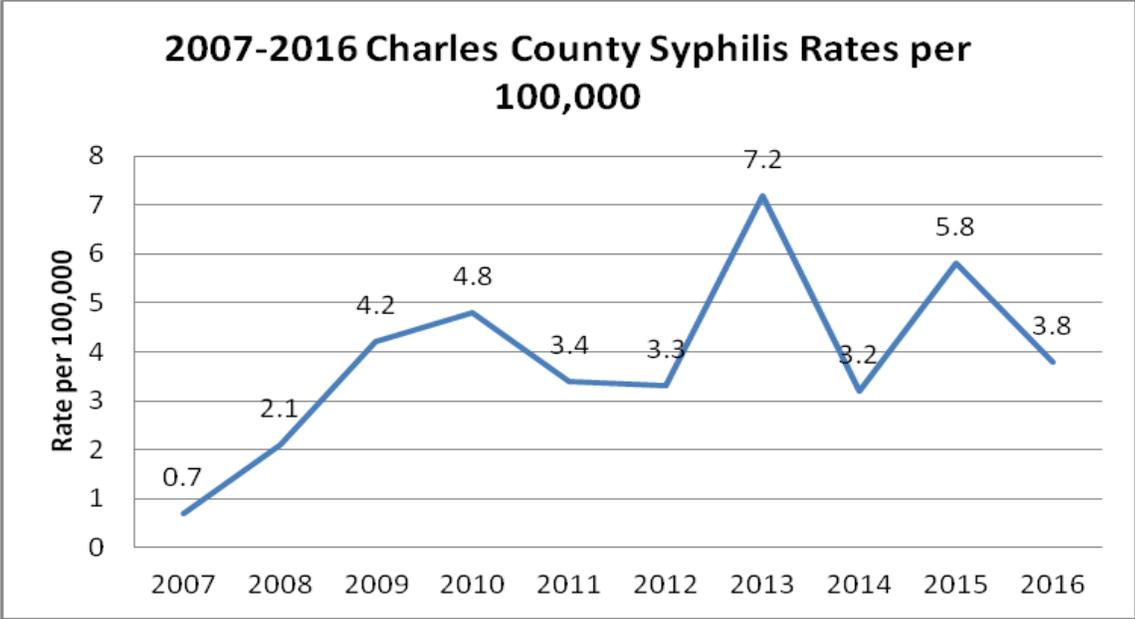
Gonorrhea In Maryland Incidence Rates by Zipcode, 2016



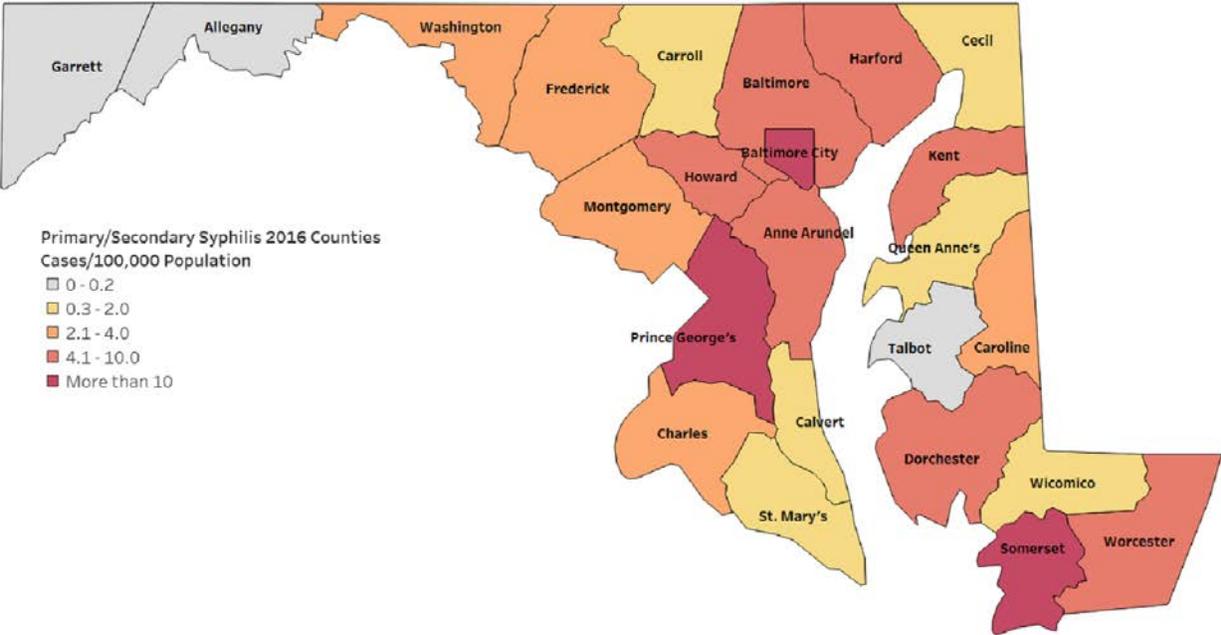
Source: Maryland Department of Health. 2016 Epidemiology and Disease Control Programs.

Syphilis:

In terms of Syphilis, Charles County rates have been increasing. However, the number of cases each year is low, and rate can change dramatically with just a few additional cases. The 2016 Charles County syphilis incidence rate was 3.8; the 2016 Maryland state syphilis incidence rate was higher at 8.5 per 100,000. The Charles County 2016 Syphilis incidence rate is a decrease from the 2013 rate of 7.2 reported in the last needs assessment report.



Primary/Secondary Syphilis In Maryland
Incidence Rates by County, 2016



Source: Maryland Department of Health. 2016 Epidemiology and Disease Control Programs.

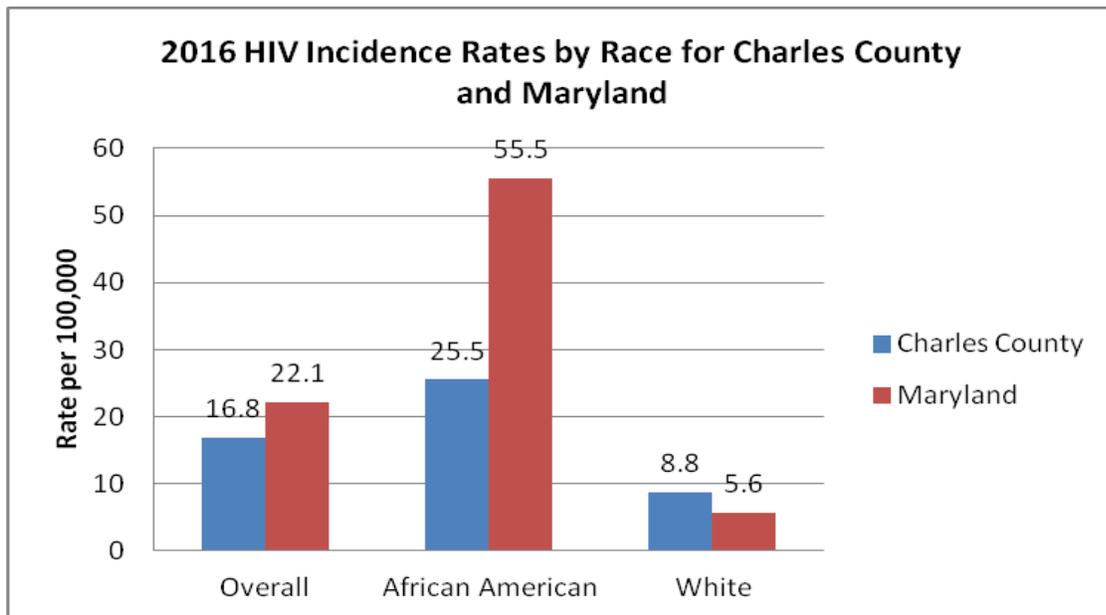
HI Incidence:

This indicator shows the rate of adult/adolescent cases (age 13+) diagnosed with HIV (per 100,000 population). HIV is a significant and preventable public health problem. An estimated 16% of people with HIV in Maryland are undiagnosed. We have the knowledge and tools needed to slow the spread of HIV infection and improve the health of people living with HIV.

The 2016 Charles County HIV Incidence rate was 16.8 per 100,000. This is below the Maryland state average rate of 22.1 per 100,000. The Charles County HIV Incidence rate is the 7th highest among the Maryland jurisdictions.

There are significant disparities in HIV incidence. The 2016 Charles County African American HIV incidence rate was 25.5 per 100,000 compared to 8.8 per 100,000 for Charles County Whites. The same trend is seen on a state level.

The Charles County HIV incidence rate has decreased each year from 31.7 in 2014 to 20.0 in 2015 to 16.8 in 2016.



In 2016, there were 22 adult/adolescent (age 13+) HIV cases diagnosed in Charles County. Of the 491 living adult/adolescent cases in Charles County at the end of 2016, 65.6% were male, 26.7% were among adults aged 40-49 years old, and 26.7% were among adults aged 50-59 years old. Non-Hispanic (NH) Blacks made up the majority (76.2%) of living adult/adolescent cases. Among living adult/adolescent cases, the most common estimated or reported exposure category was men who have sex with men (MSM) (46.6%), followed by heterosexual exposure (HET) (42.6%), and injection drug use (IDU) (7.9%).

Adult/Adolescent HIV/AIDS Data		No.
New HIV Diagnoses		22
Living HIV/AIDS Cases*		492
Characteristics of Adult/Adolescent Living Cases		
	No.	% of Total
Current Age (as of 12/31/2016)		
13-19	4	0.8%
20-29	80	16.3%
30-39	97	19.8%
40-49	131	26.7%
50-59	131	26.7%
60+	48	9.8%
Sex at Birth		
Male	322	65.6%
Female	169	34.4%
Race/Ethnicity		
Hispanic	16	3.3%
Non-Hispanic	475	96.7%
American Indian/Alaskan Native, only	0	0.0%
Asian, only	3	0.6%
Black, only	374	76.2%
Native Hawaiian/Other Pacific Islander, only	0	0.0%
White, only	72	14.7%
Multiracial/Other	26	5.3%
Estimated Exposure Category [§]		
MSM	229	46.6%
IDU	39	7.9%
MSM/IDU	14	2.9%
HET	209	42.6%
Other	1	0.2%

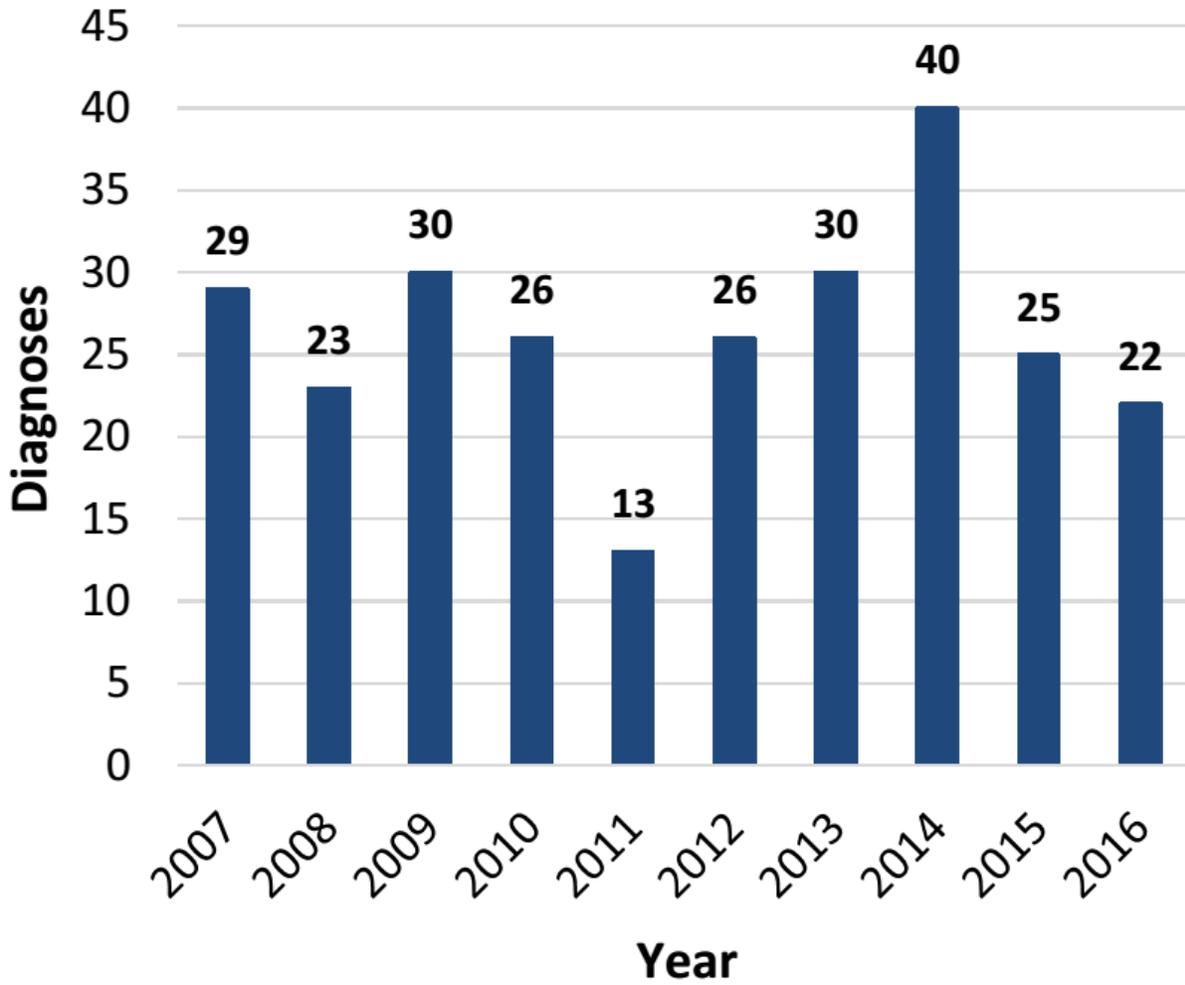
MSM = Men who have Sex with Men | IDU = Injection Drug Use |
HET = Heterosexual Exposure

* Living case data based upon the residence from the most recent report received since 1/1/2009.

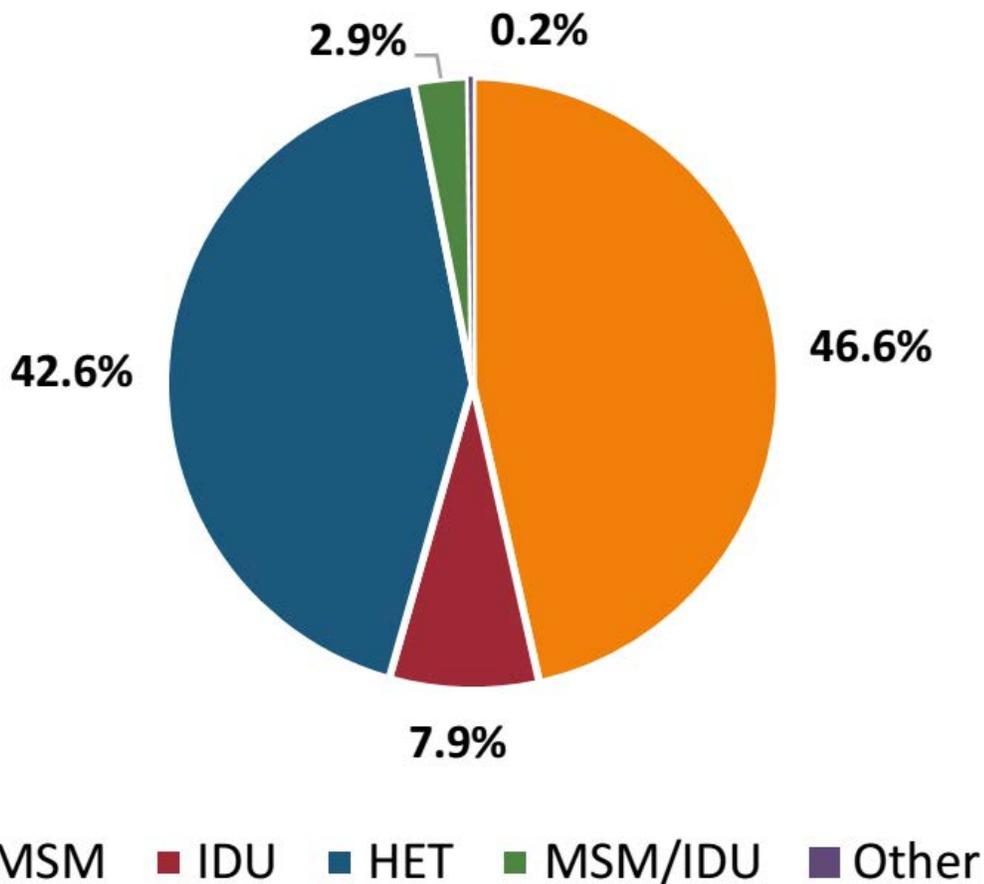
[§] Multiple imputation was used to estimate and adjust for missing transmission category. Discrepancies in tables between totals and percentages of components are due to rounding.

Data reported through 6/30/2017 from the Enhanced HIV/AIDS Reporting System (eHARS).

HIV Diagnoses by Year, Charles County, 2007-2016



Estimated Exposure Category for Living HIV Cases by Current Residence, Charles County, 2016



HIV/AIDS/STI References:

1. 2007-2016 Charles County and Maryland Chlamydia, Gonorrhea, and Syphilis Rates. Maryland Department of Health. Infectious Disease Bureau. Available at: https://phpa.health.maryland.gov/Pages/infectious_disease.aspx.
2. 2016 HIV Incidence Rates by Race for Charles County and Maryland. Maryland Department of Health. Accessed through the Maryland State Health Improvement Process website. Available at: http://charles.md.networkofcare.org/ph/ship-detail.aspx?id=md_ship20.
3. 2016 Charles County and Maryland HIV/AIDS Diagnoses and Living Cases. Maryland Department of Health. Infectious Disease and Environmental Health Administration. Charles County HIV Fact Sheet

2016. Available at: <https://phpa.health.maryland.gov/OIDEOR/CHSE/SiteAssets/Pages/County-Data-Sheets/Charles-County-Fact-Sheet.pdf>.

Qualitative Data Relating to Communicable Disease, Environmental Health, Sexually Transmitted Infections, HIV/AIDS:

Just about half of the long survey participants reported that HIV/AIDS (43%) and sexually transmitted diseases (45%) are a problem in Charles County on some level. Only 12% felt that HIV/AIDS is a “serious problem.” 17% reported that sexually transmitted diseases are a “serious problem” in the county.

Environmental Health was seen as a problem in Charles County by less half of the respondents (44%) and over half or 55% for flu and pneumonia. Environmental health and flu/pneumonia were given high percentages reporting no problem in the county (11% and 12%).

Health Issue/Condition:	Percent Reporting No Problem in county	% Reporting this as a problem at any level	Percent Reporting this as a serious problem
<i>HIV/AIDS</i>	7%	43%	12%
<i>Sexually transmitted diseases</i>	7%	45%	17%
<i>Flu/Pneumonia</i>	11%	55%	8%
<i>Environmental Health</i>	12%	44%	13%

Behavioral risk factor data relating to communicable disease, STI’s, HIV/AIDS included:

- 79.33% reported that they always wash their hands before they prepare food and after they use the bathroom;
- 55.56% always get a flu shot each year;
- 42.91% always practice safe sex;
- 86.6% never use illegal drugs.

Communicable diseases were not a topic of discussion at many of the focus groups. The Reproductive Health and Infant Health focus group did discuss sexually transmitted diseases and AIDS and an increase in the Men having Sex with Men (MSM) population.

Participants of the special population focus group responded to topics regarding environmental health in Charles County. Unhealthy homes, particularly those without indoor plumbing and a potable water supply were of concern. They are also concerned about impaired recreational waters. There is a need to secure grant funding to address public environmental health concerns such as storm water management, lack of indoor plumbing and potable water supplies, and impaired recreational waters.

Tobacco Statistics

Adult current tobacco use by product (any tobacco, cigarettes, cigars, smokeless, ESDs) 2012-2016

The Maryland Behavior Risk Factor Surveillance System is used to provide estimates for Maryland and Charles County on smoking status. In 2016, approximately 17% of Charles County residents reported use of any tobacco product. This is similar to the Maryland percentage of 16.6% of Maryland residents who use any tobacco product. Charles County has seen a decrease in tobacco product usage from 20.5% in 2012 to 17.0% in 2016. This same trend was seen on a state level.

Use of cigarettes in Charles County has decreased significantly from 19.3% in 2012 to 13.1% in 2016. The 2016 cigarette percentage for Charles County is less than the Maryland percentage of 13.7%. 2016 data is not available on a county level for cigar and smokeless tobacco usage. However, both substances have seen small decreases in usage on a state level.

Lastly, the use of electronic smoking devices or ESD's was available for Charles County in 2016. 4.0% of Charles County residents reported use of a ESD. This is slightly higher than the percentage reported for Maryland overall (3.2%).

Maryland

CURRENT USE OF TOBACCO/ELECTRONIC SMOKING DEVICES (ESDs)			
<i>Estimated Prevalence (%)</i>	2012	2014	2016
<i>Confidence Interval (CI)</i>	% CI N	% CI N	% CI N
<i>Estimated Number (N)</i>			
Any Tobacco	19.4	19.0	16.6
<i>(Any tobacco includes cigarettes, cigars, smokeless tobacco, and other tobacco products, excludes ESDs)</i>	(18.2-20.7)	(17.6-20.4)	(15.7-17.5)
	856,080	884,461	780,867
Cigarettes	16.2	14.6	13.7
	(15.0-17.4)	(13.4-15.9)	(12.9-14.5)
	708,885	655,824	608,816
Cigars	4.4	4.5	3.7
	(3.6-5.2)	(3.6-5.4)	(3.2-4.2)
	169,763	192,448	154,865
Smokeless Tobacco	2.0	1.7	1.6
	(1.5-2.4)	(1.3-2.2)	(1.3-1.9)
	86,729	76,682	70,410
ESDs	No BRFSS	3.2	3.2
	Data	(2.5-3.8)	(2.8-3.7)
	Collected	135,090	141,529

Charles County

CURRENT USE OF TOBACCO/ELECTRONIC SMOKING DEVICES (ESDs)			
<i>Estimated Prevalence (%)</i>	2012	2014	2016
<i>Confidence Interval (CI)</i>	% CI N	% CI N	% CI N
<i>Estimated Number (N)</i>			
Any Tobacco <i>(Any tobacco includes cigarettes, cigars, smokeless tobacco, and other tobacco products, excludes ESDs)</i>	20.5 (13.5-27.4) 27,840	17.4 (11.9-22.9) 20,642	17.0 (13.1-20.8) 20,425
Cigarettes	19.3 (12.3-26.3) 26,018	12.2 (7.2-17.1) 13,972	13.1 (9.8-16.5) 15,086
Cigars	BRFSS Data Not Available	BRFSS Data Not Available	BRFSS Data Not Available
Smokeless Tobacco	0.8 (0.06-1.5) 1,086	BRFSS Data Not Available	BRFSS Data Not Available
ESDs	No BRFSS Data Collected	BRFSS Data Not Available	BRFSS Data (1.7-6.3) 4,485

3. Adult current tobacco use by gender and race/ethnicity (White, AA/Black, Asian, Hispanic/Latino, American Indian/Alaskan Native) 2012-2016

When examining current tobacco use by gender, males are more likely to report use than females. For Charles County, 23.2% of men and 11.4% of women reported current tobacco use in 2016. The percentage of Charles County men reporting current tobacco use decreased from 2013 to 2016 while the percentage of females reporting current tobacco use increased from 2013 to 2014 and then decreased from 2014 to 2016. On a state level, current tobacco use for both males and females decreased from 2013 to 2016.

When analyzing rates by race and ethnicity, current tobacco use percentages are only available for Whites, African Americans, and all minority combined in Charles County. Due to small case counts, percentages cannot be calculated for Asian, Hispanic, and American Indian/Alaskan Native. Current tobacco use is higher for Charles County Whites than African Americans or All Minorities Combined (21.5% vs. 13.8% and 13.7%). The same was true on a state level. The rate of current tobacco use has fluctuated for Whites whereas rates for all minorities have seen a decline.

Maryland

CURRENT TOBACCO USE — Gender and Race/Ethnicity			
<i>Estimated Prevalence (%)</i>	2012	2014	2016
<i>Confidence Interval (CI)</i>	% CI N	% CI N	% CI N
<i>Estimated Number (N)</i>			
Female	16.1 (14.6-17.7) 383,016	14.6 (13.0-16.2) 354,932	12.9 (11.8-13.9) 316,778
Male	23.5 (21.5-25.6) 507,209	23.9 (21.5-26.2) 529,529	20.6 (19.2-22.1) 464,089
White	21.1 (19.6-22.6) 529,761	19.7 (18.0-21.4) 505,765	18.0 (16.8-19.2) 457,753
African American/Black	20.2 (17.5-22.8) 260,115	21.9 (18.8-25.0) 285,232	16.9 (15.1-18.7) 225,762
Asian	BRFSS Data Not Available	BRFSS Data Not Available	5.5 (3.1-7.8) 16,580
Hispanic/Latino	15.8 (10.0-21.5) 58,461	12.1 (7.3-16.9) 46,888	12.1 (9.1-15.2) 50,910
American Indian/Alaskan Native	BRFSS Data Not Available	28.0 (13.5-42.6) 5,405	42.6 (30.6-54.5) 28
Minority Combined (Race & Female)	17.8 (16.3-19.2) 590,081	17.1 (15.5-18.7) 581,693	14.6 (13.6-15.6) 508,546

Charles County

CURRENT TOBACCO USE — Gender and Race/Ethnicity			
<i>Estimated Prevalence (%)</i>	2012	2014	2016
<i>Confidence Interval (CI)</i>	% CI N	% CI N	% CI N
<i>Estimated Number (N)</i>			
Female	9.6 (5.1-14.2) 6,687	13.3 (6.3-20.4) 8,336	11.4 (7.3-15.4) 7,193
Male	31.5 (19.5-43.5) 21,446	21.9 (13.3-30.6) 12,305	23.2 (16.3-30.0) 13,232
White	23.1 (14.1-32.0) 17,618	20.5 (14.0-27.0) 11,781	21.5 (15.8-27.1) 21.5
African American/Black	BRFSS Data Not Available	BRFSS Data Not Available	13.8 (7.8-19.8) 7,006
Asian	BRFSS Data Not Available	BRFSS Data Not Available	BRFSS Data Not Available
Hispanic/Latino	BRFSS Data Not Available	BRFSS Data Not Available	BRFSS Data Not Available
American Indian/Alaskan Native	BRFSS Data Not Available	BRFSS Data Not Available	BRFSS Data Not Available
Minority Combined (Race & Female)	15.2 (7.9-22.5) 14,964	14.5 (8.2-20.9) 13,419	13.7 (9.7-17.8) 12,567

4. Adult current tobacco use by education level (No HS diploma, HS diploma/GED, Some College, 4-Yr. College Degree)

2012-2016

As the level of education increases, the rate of tobacco use decreases. Those without a high school diploma are more likely to report tobacco use than those with a high school diploma or some college. This is true for both Maryland and Charles County. The tobacco use rate among those with a high school diploma/GED is higher in Charles County than Maryland (26.6% vs. 22.2%). It was lower among those with some college (CC 13.0% vs. MD 17.4%); however, it is higher among college graduates (CC 10.9% vs. MD 8.3%). Charles County has seen some decreases in the rate of tobacco use among people with some college. Charles County has seen fluctuation in the rate of tobacco use among individuals with a high school diploma/GED.

Maryland

Education			
<i>No High School</i>	31.7 (26.5-36.8) 174,072	32.4 (26.2-38.5) 178,390	26.9 (22.8-31.0) 142,259
<i>High School or GED</i>	25.1 (22.4-27.7) 300,996	25.1 (22.1-28.1) 308,602	22.2 (20.4-24.0) 273,598
<i>Some College</i>	21.9 (19.4-24.5) 277,274	19.1 (16.5-21.6) 249,007	17.4 (15.6-19.1) 230,664
<i>College Grad</i>	9.2 (7.9-10.4) 137,121	9.5 (8.1-10.9) 146,193	8.3 (7.4-9.2) 133,897

Charles County

Education			
<i>No High School</i>	BRFSS Data Not Available	BRFSS Data Not Available	BRFSS Data Not Available
<i>High School or GED</i>	23.6 (11.1-36.2) 11,935	21.1 (9.7-32.5) 8,917	26.6 (18.1-35.1) 9,737
<i>Some College</i>	BRFSS Data Not Available	15.4 (8.1-22.6) 5,712	13.0 (7.3-18.8) 5,900
<i>College Grad</i>	BRFSS Data Not Available	BRFSS Data Not Available	10.9 (5.9-16.0) 3,382

5. Adult current tobacco use by annual household income (<\$15K, up to \$25K, upto \$50K, up to \$75K, >\$75K) 2012-2016

The following tables demonstrate that the higher the income level, the lower the rate of tobacco use among adults. Those earning more than \$50,000 per year in Charles County are less likely to report tobacco use than those who make less than \$50,000 (15.6% vs. 21.1%). Charles County has seen decreases in tobacco use among all income levels from 2013 to 2016. The same trends can be observed at the state level.

Maryland

CURRENT TOBACCO USE — Income and Education			
<i>Estimated Prevalence (%)</i>	2012	2014	2016
<i>Confidence Interval (CI)</i>	% CI N	% CI N	% CI N
<i>Estimated Number (N)</i>			
Income			
< \$15k	36.7 (30.2-43.3) 113,594	34.5 (26.9-42.1) 93,273	34.7 (29.8-39.7) 98,000
\$15k- < \$25k	24.8 (20.7-29.0) 139,763	22.6 (18.3-26.9) 132,331	22.6 (19.4-25.8) 110,758
\$25k- < \$50k	23.8 (20.6-27.0) 202,585	22.5 (18.8-26.2) 585,314	19.6 (17.3-22.0) 143,290
\$50k- < \$75k	17.2 (14.1-20.2) 107,755	22.5 (18.1-26.9) 125,909	16.6 (14.0-19.1) 94,762
\$75k +	14.1 (12.5-15.8) 223,886	13.7 (12.0-15.4) 230,637	12.2 (11.0-13.4) 212,024

Charles County

Income			
< \$50k	26.5 (14.8-38.3) 12,665	BRFSS Data Not Available	21.1 (12.1-30.1) 5,514
> \$50k	19.1 (9.1-29.0) 14,418	17.6 (11.1-24.1) 12,665	15.6 (10.9-20.4) 11,328

6. Middle School Tobacco Use by product (any tobacco, cigarettes, cigars, smokeless, ESDs) 2013-2016

4.9% of Charles County middle school students reported use of any tobacco product in 2016. Although the percentage is small, there has been some fluctuation in the percentage since 2012. The 2016 Charles County middle school tobacco use percentage is slightly above the Maryland state average percentage (4.9% vs. 4.1%). Cigarette usage (3.1% to 1.6%) and cigar usage (3.0% to 2.7%) in Charles County middle school students. The percentage of Charles County middle school students reporting smokeless tobacco use has increased from 1.5% to 2.6% and is now greater than the Maryland percentage of 1.9%. Charles

County saw a decline in middle school students reporting use of electronic smoking devices (ESD's) from 9.3% to 5.7%. The 2016 Charles County ESD percentage of 5.7% is still greater than the Maryland percentage of 4.7%.

Maryland

CURRENT USE OF TOBACCO/ELECTRONIC SMOKING DEVICES (ESDs)			
<i>Estimated Prevalence (%)</i>	2013	2014	2016
<i>Confidence Interval (CI)</i>	% CI N	% CI N	% CI N
<i>Estimated Number (N)</i>			
Middle School Students			
Any Tobacco <i>(Any tobacco includes cigarettes, cigars, and smokeless tobacco, excludes ESDs)</i>	5.6 (5.2-6.1) 9,431	5.4 (4.8-6.0) 9,477	4.1 (3.6-4.6) 7,492
Cigarettes	3.9 (3.5-4.3) 6,717	2.5 (2.2-2.9) 19,220	1.3 (1.1-1.6) 2,513
Cigars	4.2 (3.8-4.6) 7,245	3.6 (3.2-4.1) 6,416	2.5 (2.2-2.9) 4,743
Smokeless Tobacco	3.0 (2.6-3.5) 5,323	1.9 (1.6-2.2) 3,349	1.9 (1.6-2.2) 3,545
ESDs	No ESD Data Collected	7.6 (6.9-8.3) 13,318	4.7 (4.3-5.2) 8,396

Charles County

CURRENT USE OF TOBACCO/ELECTRONIC SMOKING DEVICES (ESDs)			
<i>Estimated Prevalence (%)</i>	2013	2014	2016
<i>Confidence Interval (CI)</i>	% CI N	% CI N	% CI N
<i>Estimated Number (N)</i>			
Middle School Students			
Any Tobacco <i>(Any tobacco includes cigarettes, cigars, and smokeless tobacco, excludes ESDs)</i>	4.2 (2.9-5.6) 227	5.9 (3.5-8.3) 324	4.9 (3.3-6.5) 272
Cigarettes	3.1 (2.1-4.6) 171	2.8 (1.8-4.2) 154	1.6 (0.7-2.5) 92
Cigars	3.0 (2.1-4.4) 167	3.2 (2.2-4.7) 181	2.7 (1.6-3.7) 153
Smokeless Tobacco	1.5 (0.9-2.4) 83	2.4 (1.1-5.1) 137	2.6 (1.4-3.8) 151
ESDs	No ESD Data Collected	9.3 (7.3-11.3) 508	5.7 (3.9-7.5) 303

7. Middle School current tobacco use by gender and race/ethnicity (White, AA/Black, Asian, Hispanic/Latino, American Indian/Alaskan Native) 2013-2016

Charles County male middle school students were more likely to report tobacco use than Charles County female middle school students (5.9% vs. 3.8%). The percentage of middle school males using tobacco in Charles County has increased since 2013. The percentage for female middle school students has fluctuated since 2013 but is currently at the same level as 2013. The percentages for both females and males in Charles County are higher than those reported for Maryland overall (Males 5.9% vs. 4.6% and Females 3.8% vs. 3.3%).

On a county level, data is only available for White and African American middle school students in Charles County. Both races have seen fluctuations in rates since 2013. Currently, the Charles County African American middle school student tobacco use percentage is higher than the Charles County White middle school student tobacco use percentage (4.6% vs. 3.6%). The Charles County African American percentage is identical to the state percentage. The Charles County White percentage is above the state percentage (3.6% vs. 2.9%).

Maryland

Middle School Students			
<i>Middle School Female</i>	4.7 (4.2-5.3) 3,869	3.9 (3.4-4.4) 3,357	3.3 (2.9-3.7) 2,929
<i>Middle School Male</i>	6.5 (5.9-7.1) 5,424	6.6 (5.7-7.6) 5,830	4.6 (4.0-5.3) 4,261
<i>White</i>	4.2 (3.6-4.8) 2,941	4.3 (3.6-5.0) 2,958	2.9 (2.4-3.4) 2,019
<i>African American/Black</i>	6.6 (5.8-7.4) 3,537	6.6 (5.6-7.6) 3,551	4.6 (3.9-5.2) 2,604
<i>Asian</i>	2.8 (1.2-4.5) 262	2.8 (1.3-4.3) 267	2.0 (1.0-2.9) 191
<i>Hispanic/Latino</i>	5.2 (3.1-7.3) 273	3.2 (2.2-4.2) 258	3.0 (1.7-4.4) 236
<i>American Indian/Alaskan Native</i>	10.7 (7.4-14.0) 203	7.1 (4.7-9.4) 161	6.7 (3.5-10.0) 91

Charles County

Middle School Students			
<i>Middle School Female</i>	3.8 (2.3-6.1) 99	4.6 (2.5-6.8) 121	3.8 (2.0-5.7) 101
<i>Middle School Male</i>	4.5 (3.2-6.4) 123	6.5 (4.0-8.9) 184	5.9 (3.5-8.3) 170
<i>White</i>	2.0 (0.5-3.5) 31	4.2 (2.0-6.4) 64	3.6 (1.0-6.3) 52
<i>African American/Black</i>	4.6 (2.8-6.3) 128	5.4 (3.1-7.7) 150	4.6 (2.7-6.4) 130
<i>Asian</i>	YRBS Data Not Available	YRBS Data Not Available	YRBS Data Not Available
<i>Hispanic/Latino</i>	YRBS Data Not Available	YRBS Data Not Available	YRBS Data Not Available
<i>American Indian/Alaskan Native</i>	YRBS Data Not Available	YRBS Data Not Available	YRBS Data Not Available

8. High School Tobacco Use by product (any tobacco, cigarettes, cigars, smokeless, ESDs) 2013-2016

15.0% of Charles County high school students reported using any type of tobacco product in 2016. This is a decrease from the percentages reported in both 2013 and 2014 (17.6% and 17.9%). Charles County high school students have reported less use of cigarettes and cigars from 2013 to 2016. This same trend can be seen on a state level. The percentage of Charles County high school students reporting use of smokeless tobacco has fluctuated and is currently slightly higher than the percentage reported in 2013

(6.9% vs. 7.4%). The Charles County tobacco use percentage of 15% in 2016 is similar to the state percentage of 14.4%.

The reported use of ESD's among Charles County high school students decreased from 23.1% in 2014 to 15.2% in 2016. This may be due to extensive efforts of the local CRF tobacco program to educate students on the dangers associated with use of ESD's. The Charles County high school ESD percentage is still well above the Maryland ESD percentage of 13.3%. The percentage of Charles County high school students using an ESD is higher than the percentage reporting use of any tobacco product (15.2% vs. 15.0%).

Maryland

High School Students			
Any Tobacco <i>(Any tobacco includes cigarettes, cigars, and smokeless tobacco, excludes ESDs)</i>	16.9 (16.3-17.5) 38,966	16.4 (15.7-17.1) 38,634	14.4 (13.7-15.0) 35,448
Cigarettes	11.9 (11.4-12.4) 27,877	8.7 (8.2-9.1) 20,677	8.2 (7.8-8.6) 20,653
Cigars	12.5 (11.9-13.0) 30,819	10.3 (9.9-10.8) 25,460	9.0 (8.5-9.5) 22,136
Smokeless Tobacco	7.4 (7.0-7.8) 18,438	5.8 (5.4-6.1) 13,769	6.2 (5.8-6.6) 15,225
ESDs	No ESD Data Collected	20.0 (19.4-20.5) 47,542	13.3 (12.7-13.9) 30,026

Charles County

High School Students			
Any Tobacco <i>(Any tobacco includes cigarettes, cigars, and smokeless tobacco, excludes ESDs)</i>	17.6 (15.9-19.5) 1,439	17.9 (15.8-20.0) 1,435	15.0 (13.2-16.8) 1,229
Cigarettes	12.7 (11.1-14.4) 1,056	9.2 (8.0-10.7) 744	8.6 (7.3-9.9) 720
Cigars	13.6 (12.1-15.2) 1,190	10.5 (9.2-12.0) 886	9.2 (7.8-10.6) 748
Smokeless Tobacco	6.9 (5.8-8.3) 613	6.7 (5.5-8.1) 543	7.4 (6.2-8.7) 606
ESDs	No ESD Data Collected	23.1 (21.3-24.8) 1,883	15.2 (13.4-17.0) 1,115

9. High School current tobacco use by gender and race/ethnicity (White, AA/Black, Asian, Hispanic/Latino, American Indian/Alaskan Native) 2013-2016

Charles County high school males are more likely to report use of tobacco products than females (17.8% vs. 11.2%). Tobacco use percentage for Charles County high school males and females remain slightly higher than the Maryland state average percentages (Males 17.8% vs. 16.9% and Females 11.2% vs. 10.8%). The percentages for Charles County males and females have been decreasing each year. This trend is also observed on a state level.

When examining by race, Charles County Whites and Asians have similar percentages (18.1% and 18%) that are well above the percentage for Charles County African Americans (11.6%). The percentages for Charles County Whites and Asians are also much higher than those reporting on a state level. Charles County tobacco use percentages for Whites and African Americans have seen decreases from 2013 to 2016.

Maryland

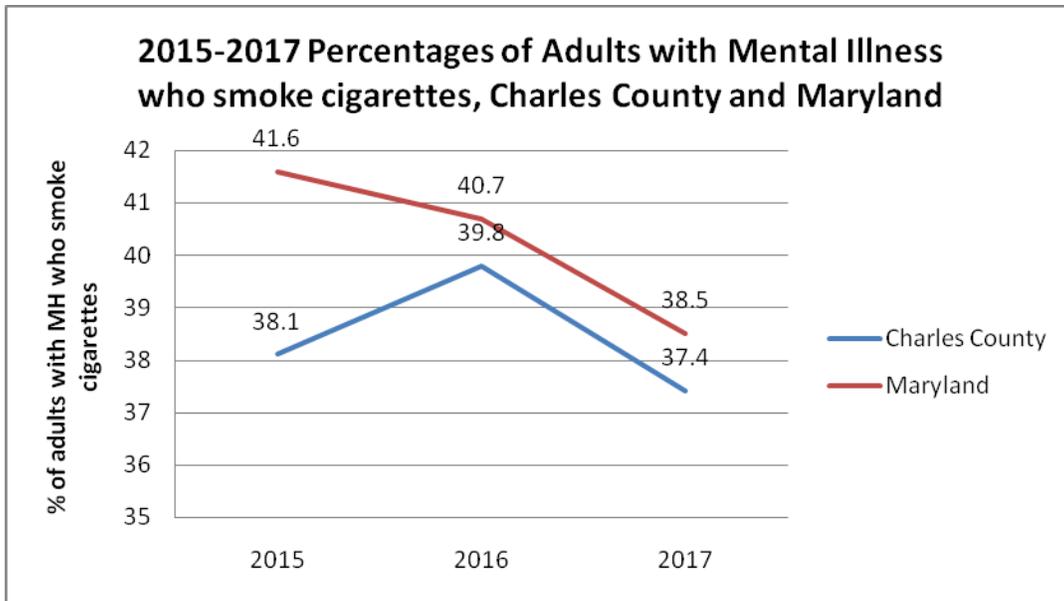
High School Students			
<i>High School Female</i>	13.6 (12.9-14.3)	13.1 (12.4-13.9)	10.8 (10.1-11.4)
	15,651	15,151	12,946
<i>High School Male</i>	19.7 (18.9-20.5)	19.0 (18.2-19.8)	16.9 (16.1-17.7)
	22,471	22,355	20,869
<i>White</i>	19.0 (18.2-19.8)	17.6 (16.9-18.4)	14.4 (13.7-15.2)
	19,256	17,238	14,253
<i>African American/Black</i>	14.1 (13.2-14.9)	14.0 (13.0-15.1)	12.3 (11.3-13.4)
	10,742	10,770	10,011
<i>Asian</i>	6.8 (5.1-8.5)	6.1 (4.9-7.2)	5.4 (4.2-6.6)
	869	806	720
<i>Hispanic/Latino</i>	11.2 (8.9-13.5)	11.4 (9.8-12.9)	11.4 (9.8-13.1)
	1,050	1,371	1,506
<i>American Indian/Alaskan Native</i>	27.5 (23.0-31.9)	30.6 (26.3-34.8)	26.2 (21.7-30.8)
	353	492	388

Charles County

High School Students			
<i>High School Female</i>	14.0 (11.9-16.3)	14.3 (12.2-16.3)	11.2 (9.2-13.3)
	553	559	439
<i>High School Male</i>	20.8 (18.4-23.3)	20.3 (17.1-23.4)	17.8 (15.4-20.2)
	865	811	744
<i>White</i>	22.2 (18.8-25.6)	20.4 (17.3-23.4)	18.1 (14.9-21.2)
	607	502	420
<i>African American/Black</i>	12.8 (10.7-15.0)	14.5 (11.9-17.1)	11.6 (9.6-13.7)
	538	607	508
<i>Asian</i>	YRBS Data Not Available	YRBS Data Not Available	18.0 (10.1-26.0)
			29
<i>Hispanic/Latino</i>	YRBS Data Not Available	YRBS Data Not Available	YRBS Data Not Available
<i>American Indian/Alaskan Native</i>	YRBS Data Not Available	YRBS Data Not Available	YRBS Data Not Available

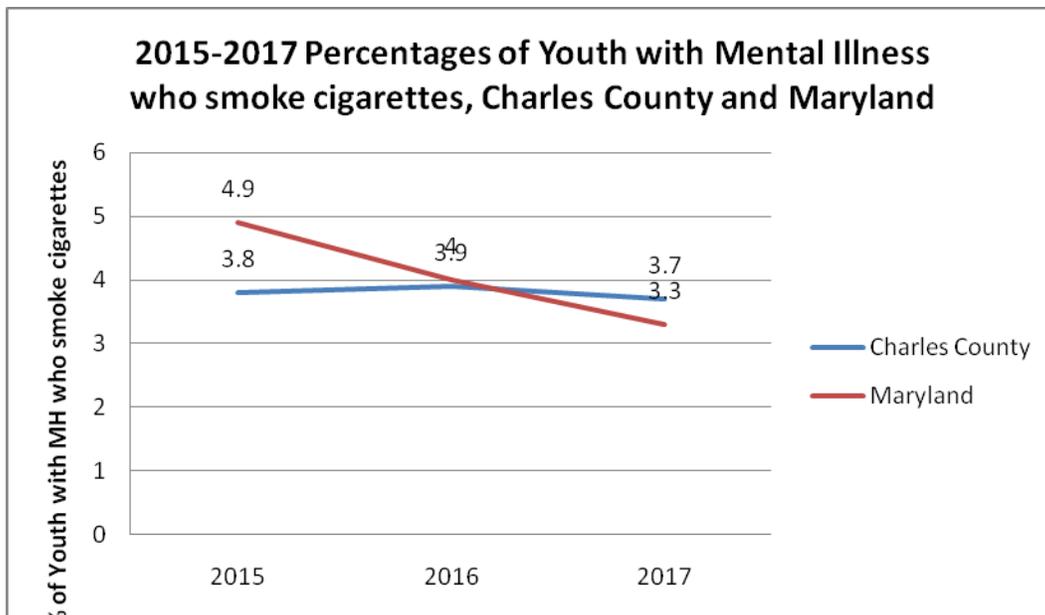
10. Adults receiving treatment for mental health conditions in state programs who smoke cigarettes 2015-2017

Approximately one third of Charles County adults receiving treatment for mental health conditions in state programs report that they smoke cigarettes (37.4%). The percentage in Charles County is slightly below the state percentage of 38.5%.



11. Youth (under 18) receiving treatment for mental health conditions in state programs who smoke cigarettes 2015-2017

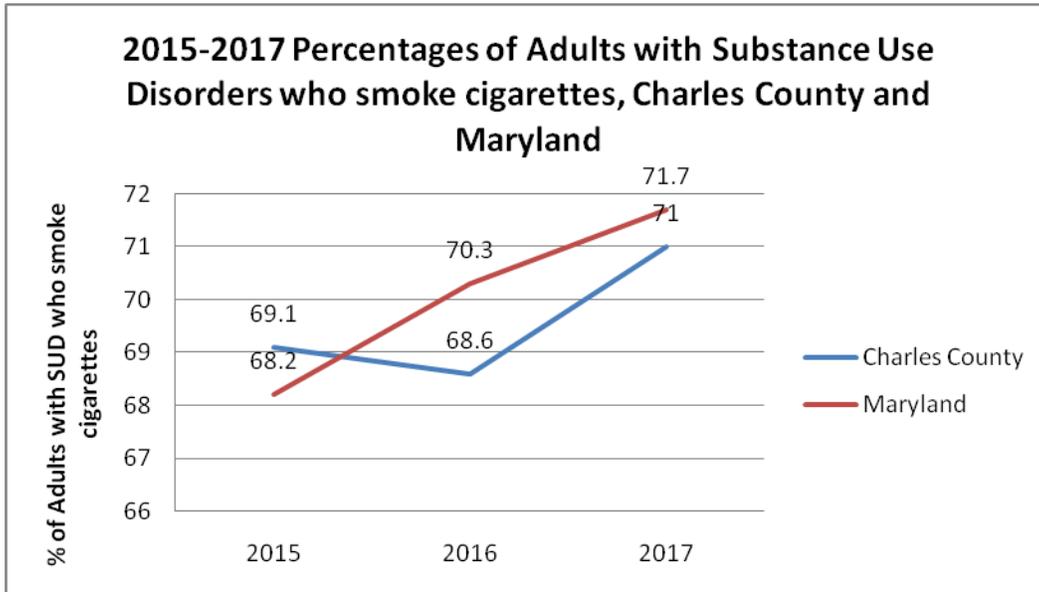
In 2017, 3.7% of Charles County youth receiving treatment for mental health conditions in state programs reported that they smoke cigarettes. This is similar to the state percentage of 3.3%. The Charles County percentage has stayed the same as rates for Maryland have decreased.



12. Adults receiving treatment for substance-related disorders in state programs who smoke cigarettes 2015-2017

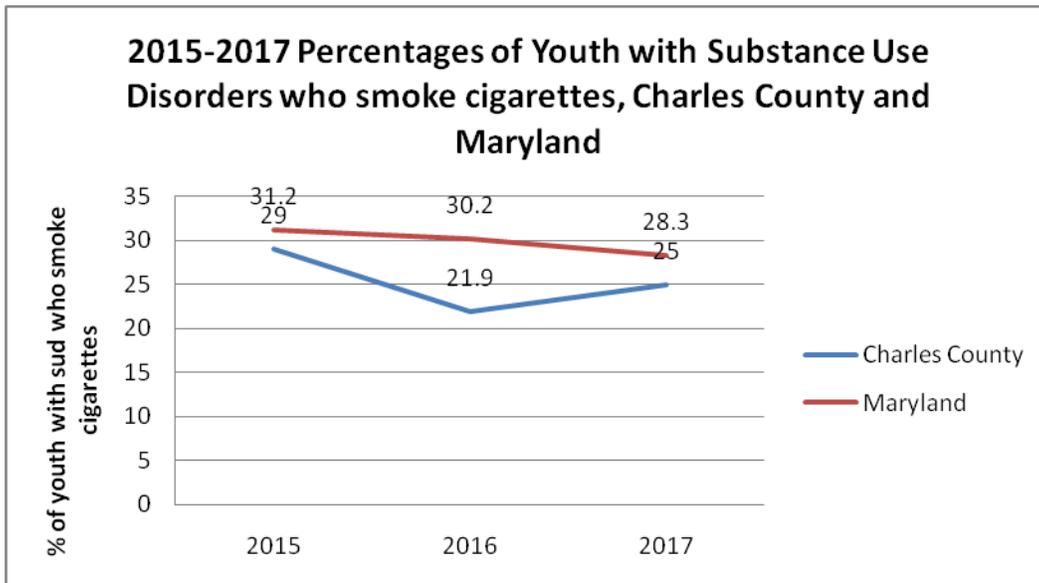
Three-fourths of Charles County adults receiving treatment for substance use disorders in a state program reported smoking cigarettes (71.0%). The Charles County percentage is similar to the state

percentage of 71.7%. Both Charles County and Maryland have seen increases in the percentage of adults with substance use disorders who smoke cigarettes.



13. Youth (under 18) receiving treatment for substance-related disorders in state programs who smoke cigarettes 2015-2017

Approximately one-fourth of youth receiving treatment for substance use disorder in state programs report smoking cigarettes (25.0%). The Charles County percentages have remained slightly below the state percentages from 2015-2017.

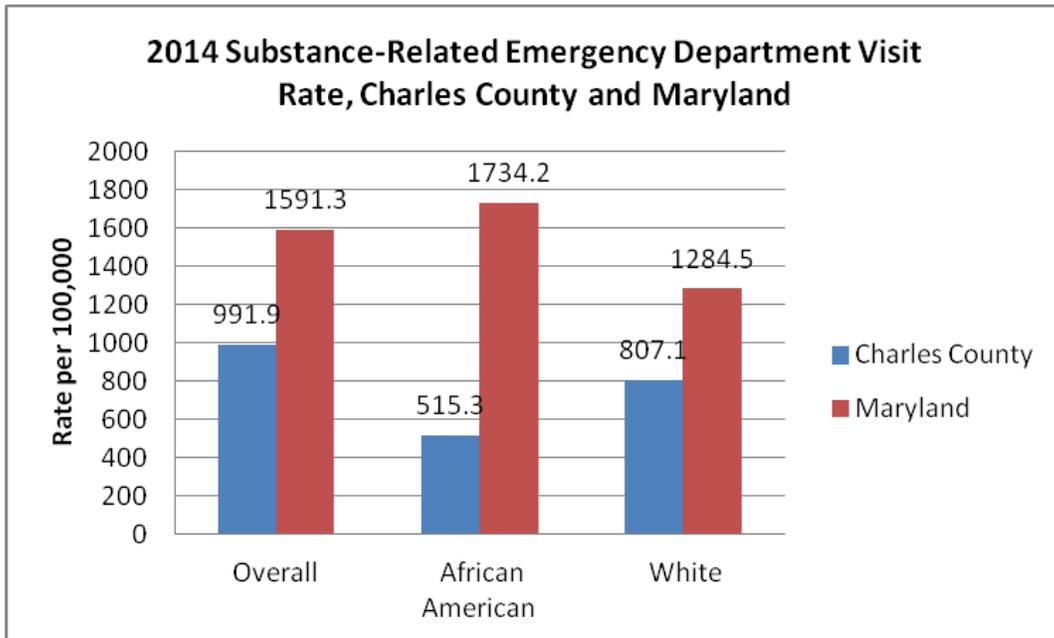


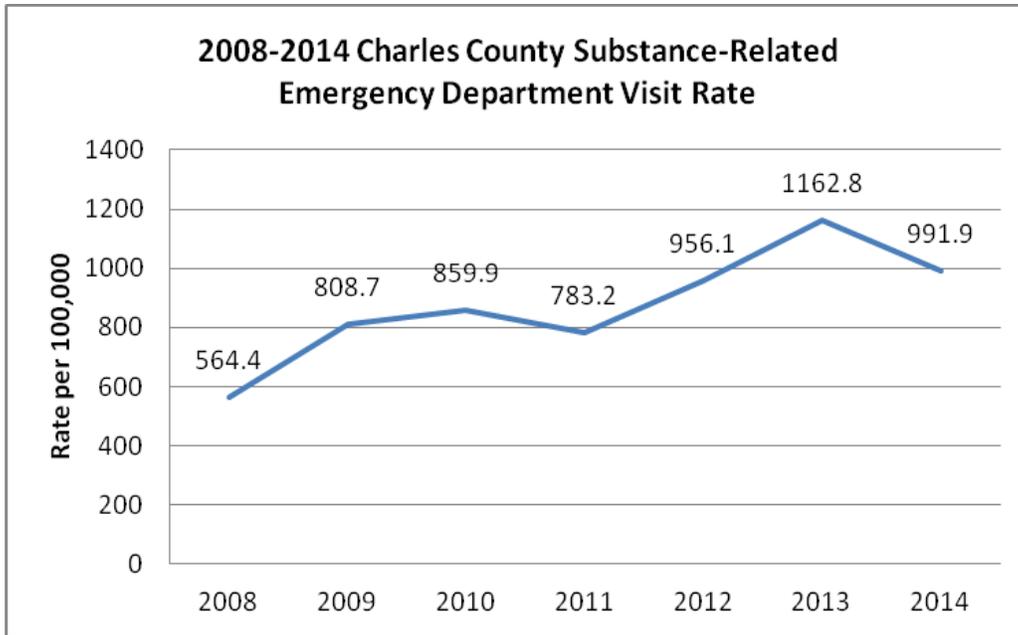
Charles County Substance Use Disorder Data:

Substance Use Disorder Hospitalization and Emergency Department Visit Rates:

This indicator shows the rate of emergency department visits related to substance abuse disorders* (per 100,000 population). Substance abuse problems can place a heavy burden on the healthcare system, particularly when persons in crisis utilize emergency departments instead of other sources of care when available. In Maryland, there were 66,383 emergency department visits for substance related disorders in 2010.*Diagnoses include alcohol-related disorders and drug related disorders. The 2016 Charles County emergency department visit rate for addiction-related conditions was 991.9 per 100,000. This rate is below the state average rate of 1591.3 per 100,000. The county rate is highest among Non-Hispanic Whites with an ED visit rate of 807.1 compared to 515.3 for Charles County Blacks.

The Charles County Addiction-related ED visit rate has continued to climb each year from 564.4 in 2008 to 1162.8 in 2013. 2014 saw a small decline to 991.9 per 100,000.





Substance use related ED visit rates have increased from 2009-2013 for all Charles County available zip codes with the exception of Bryans Road (20616). Rates could only be calculated for zip codes with a population greater than 5000 people. Disparities can be seen in substance use ED visits rates by zip code of residence. The highest rates of addictions related emergency department visits are among those living in the zip codes of La Plata (20646) and Indian Head (20640). The zip code with the greatest increase from 2009 to 2013 was La Plata (20646). This may be due to the fact that the county hospital is located within this zip code.

ED Visits for Addictions Related Conditions per 100,000 Population, 2009-2013

Zip Code	2009	2010	2011	2012	2013
20601	675.5	884.4	690.2	1083.5	1249.5
20602	815.8	970.4	850.9	971.5	1207.8
20603	460.9	409.0	395.9	601.6	605.0
20613	622.8	556.4	593.7	719.4	1094.1
20616	987.2	987.4	1066.5	917.6	770.5
20637	756.1	625.4	755.4	829.4	894.6
20640	1053.2	1102.2	1136.7	1262.9	1539.4
20646	1049.0	1130.3	1015.1	1293.9	1865.3
20695	683.0	879.7	1011.5	880.5	1072.3

Source: Maryland HSCRC Outpatient Files 2009-2013

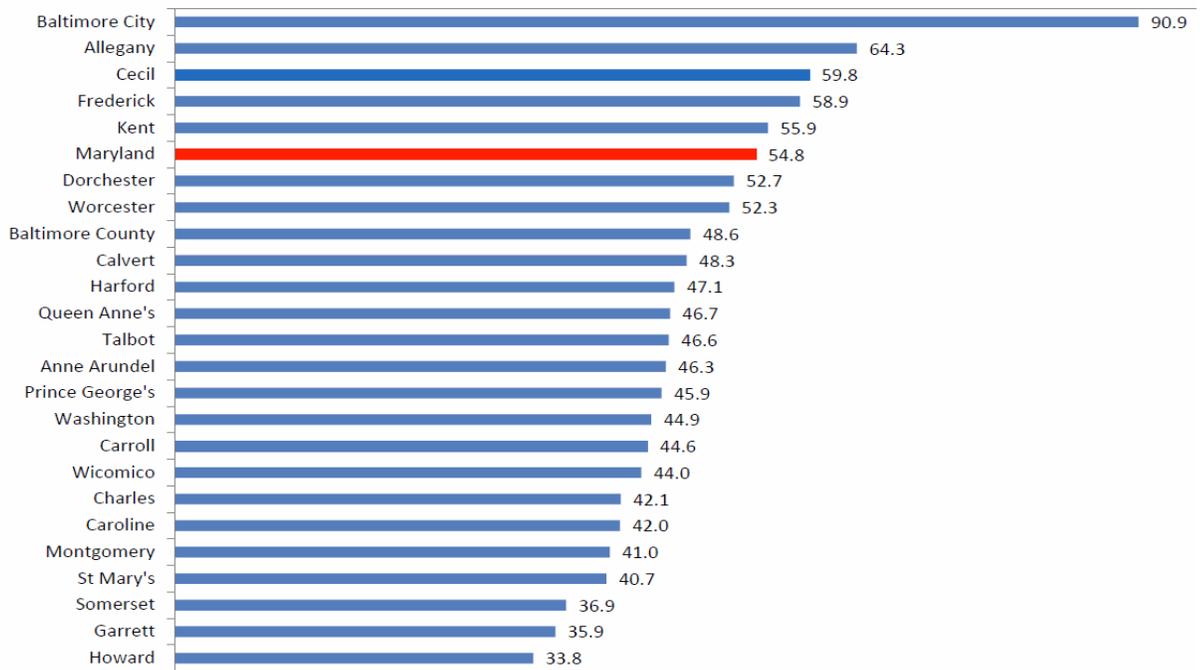
Alcohol Hospitalizations and Emergency Department Visit Rates:

The 2012 Charles County Alcohol related hospitalization rate was 42.1 per 1000 events. This is lower than the Maryland rate of 54.8 per 1000 events. This is the 7th lowest rate in Maryland.

Alcohol-Related Inpatient Hospitalizations

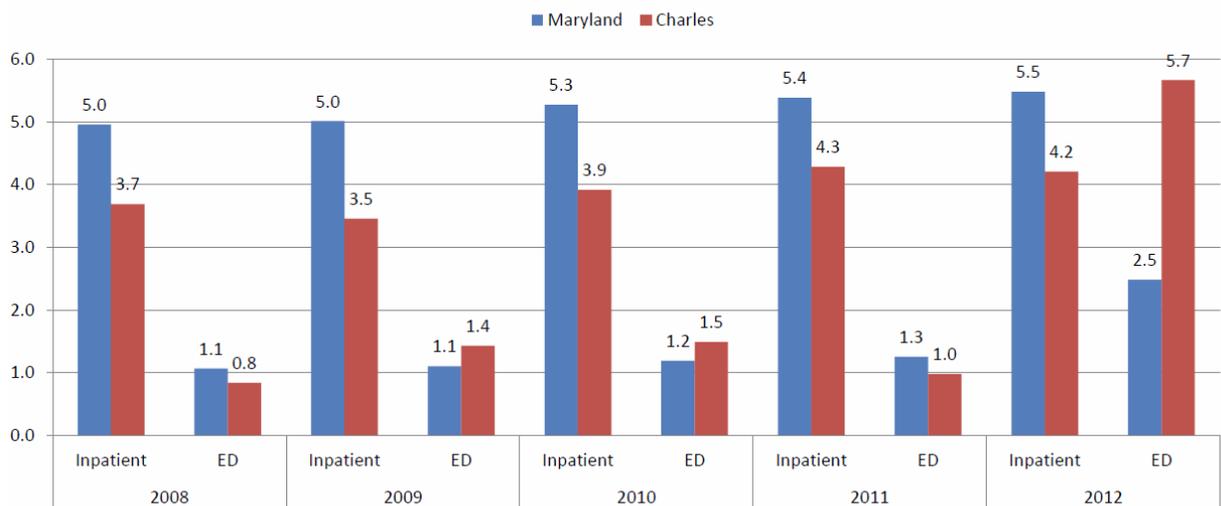
Data Source: Health Services Cost Review Commission (HSCRC)

Rate of Alcohol-Related Hospitalizations in 2012 per 1000 Events



Charles County has seen a dramatic increase in the alcohol related ED visit rate from 0.8 per 100 events in 2008 to 5.7 in 2012. This is a seven fold increase in a 4 year period. Whereas, the alcohol related hospitalization rate has remained fairly stable from 2008-2012.

Rate of Alcohol-related Inpatient Hospitalizations and ED Visits per 100 Events

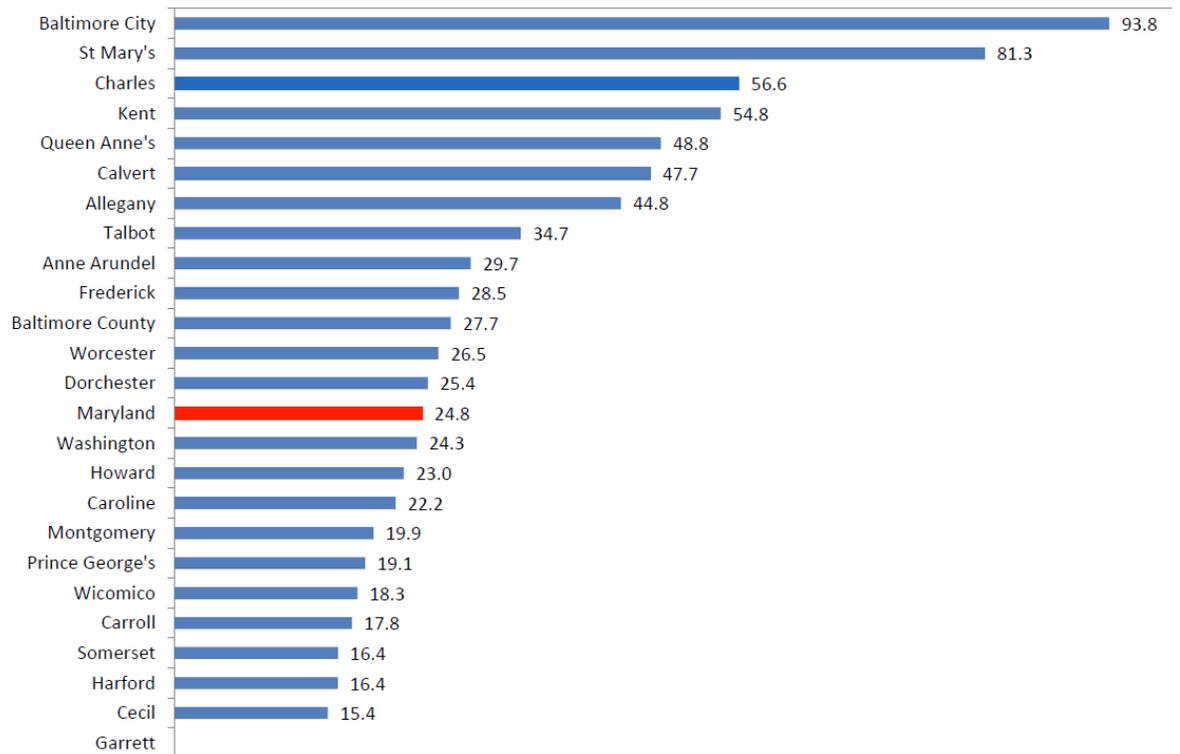


The 2012 Charles County alcohol related emergency department visit rate was 56.6 per 1000 events. This is more than double the Maryland state rate of 24.8 per 1000 events. The Charles County rate has seen a dramatic increase from the 2008 rate of 14 per 1000 events. Charles County has the third highest alcohol-related emergency department visit rate among the Maryland jurisdictions.

Alcohol-Related Emergency Department Visits

Data Source: Health Services Cost Review Commission (HSCRC)

Rate of Alcohol-Related Emergency Department Visits in 2012 per 1000 Events



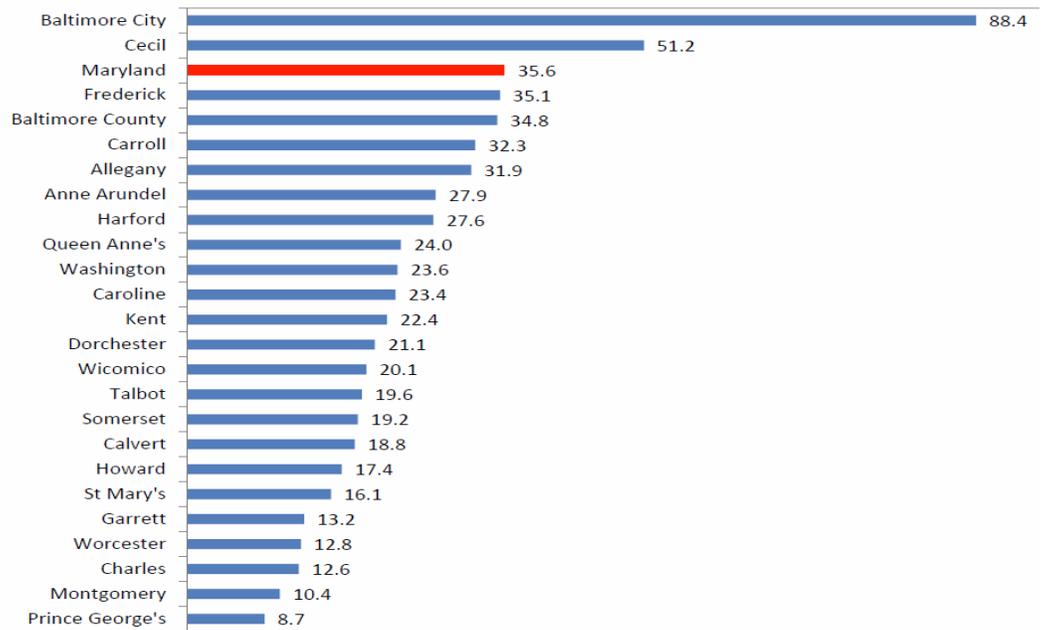
Opiate Hospitalizations and Emergency Department Visit Rates:

The Charles County 2012 opiate related inpatient hospitalization rate was 12.6 per 1000 events. This is far below the Maryland state rate of 35.6 per 1000 events. Charles County has the third lowest opiate related inpatient hospitalization rate among the Maryland jurisdictions.

Opioid-Related Inpatient Hospitalizations

Data Source: Health Services Cost Review Commission (HSCRC)

Rate of Opioid-Related Hospitalizations in 2012 per 1000 Events

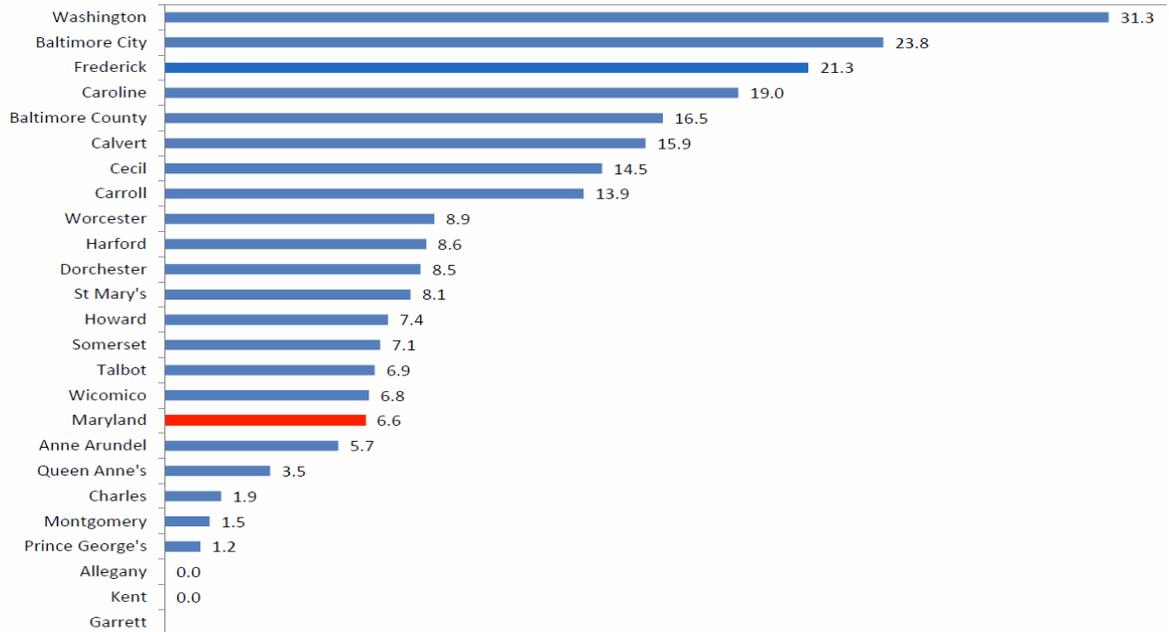


The 2012 Charles County opiate related emergency department visit rate was 1.9 per 1000 events. This is much lower than the Maryland state rate of 6.6 per 1000 events. Charles County has the 6th lowest opiate related emergency department visit rate among the Maryland jurisdictions.

Opioid-Related Emergency Department Visits

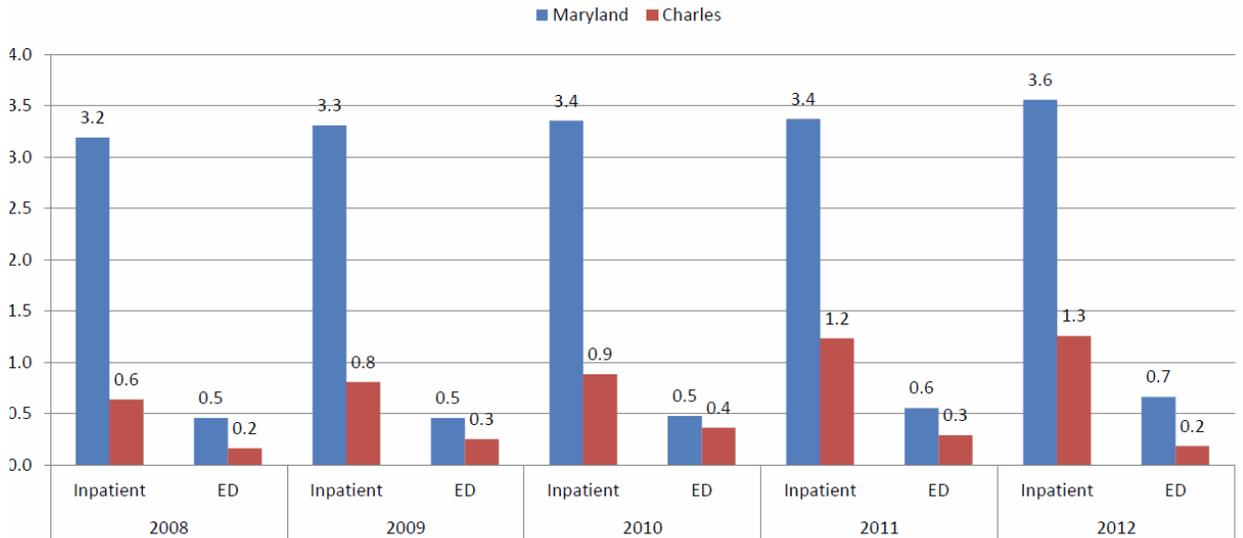
Data Source: Health Services Cost Review Commission (HSCRC)

Rate of Opioid-Related Emergency Department Visits in 2012 per 1000 Events



The Charles County Opiate-related inpatient hospitalization rate has seen an increase from 0.6 per 100 events in 2008 to 1.3 in 2012. The Charles County opiate-related hospitalization rate has remained consistent at 0.2 per 100 events.

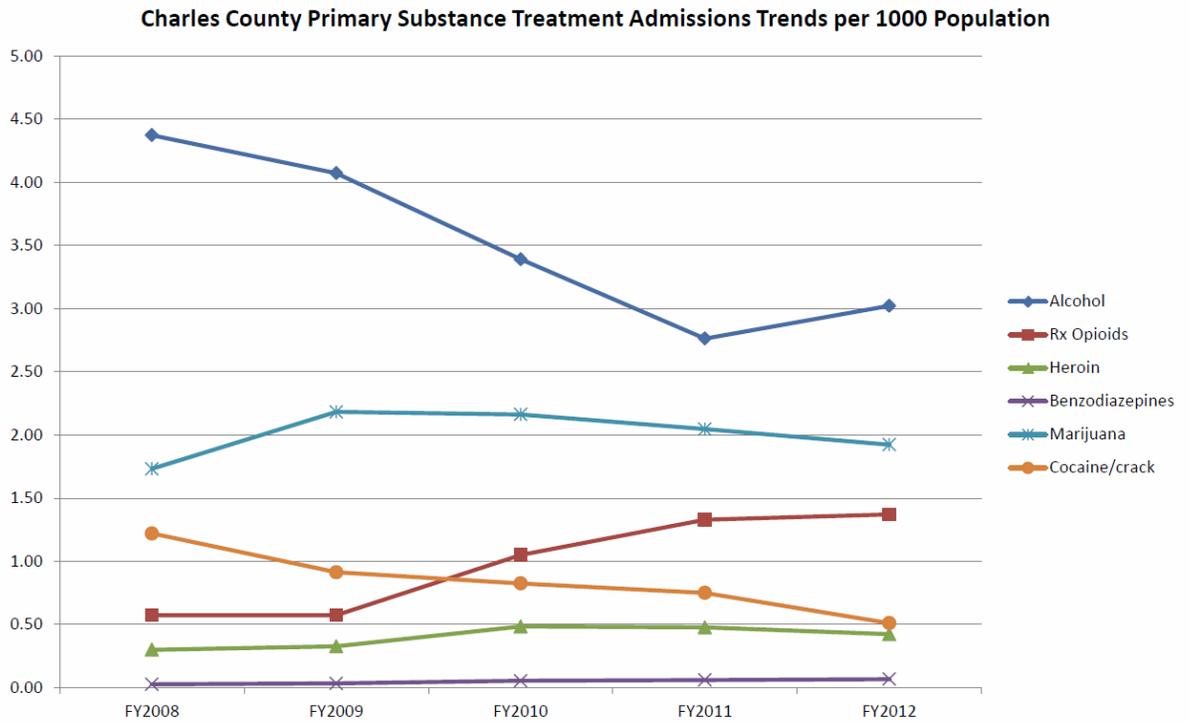
Rate of Opioid-related Inpatient Hospitalizations and ED Visits per 100 Events



The Charles County percent change in Opioid-related hospital inpatient visits from 2008 to 2011 was 0.60. This change in percentage is much greater than the Maryland state average percent change of 0.18. The same is true for Opioid-related emergency department visits. The Charles County percent change in Opioid-related ED visits from 2008 to 2011 was 0.12. This change is greater than the Maryland state average percent change of 0.07.

The Charles County 2011 opioid-related hospital inpatient admissions rate was 1.23 per 100,000. This is below the Maryland state average rate but higher than neighboring jurisdictions to the north (Prince George’s 0.72 and Montgomery 0.98). (Source for Data points 1-9: Maryland Jurisdictional Epidemiological Profiles Chartbook, February 2014).

Substance Use Disorder Treatment Admission Rates:



Source: Maryland Statewide Epidemiologic Outcomes Workgroup Jurisdictional Chartbook, February 2014.

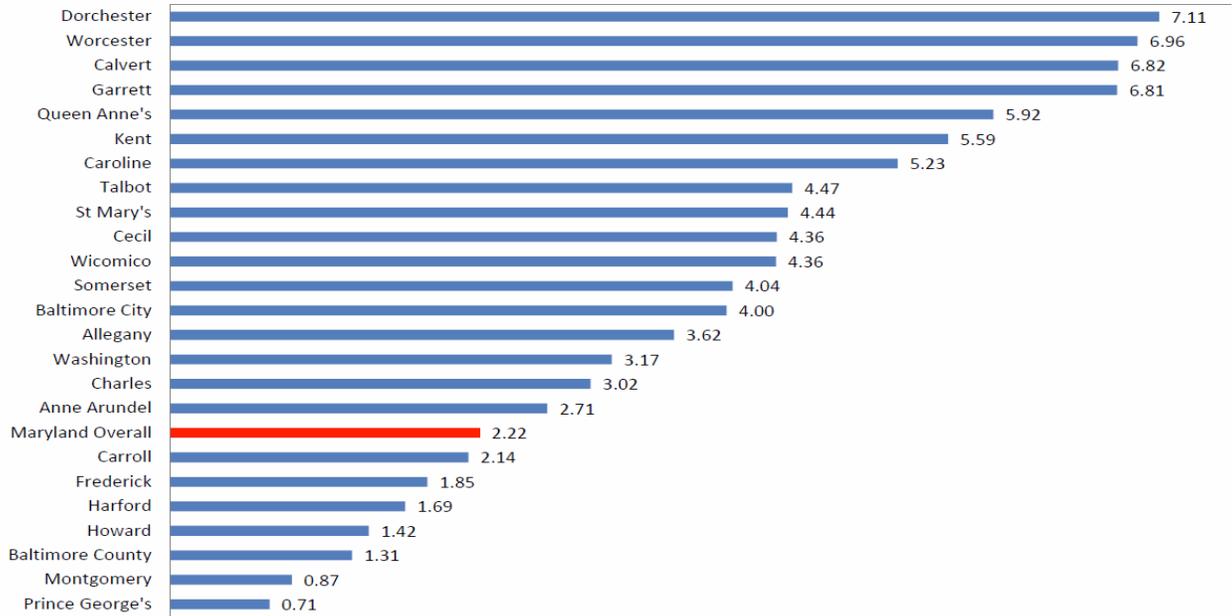
The Charles County FY 2012 alcohol treatment admission rate into a state program was 3.02 per 1000 population. This was higher than the Maryland alcohol treatment admission rate of 2.22 per 1000 population.

Treatment Admissions

Data Source: State of Maryland Automated Records Tracking (SMART)

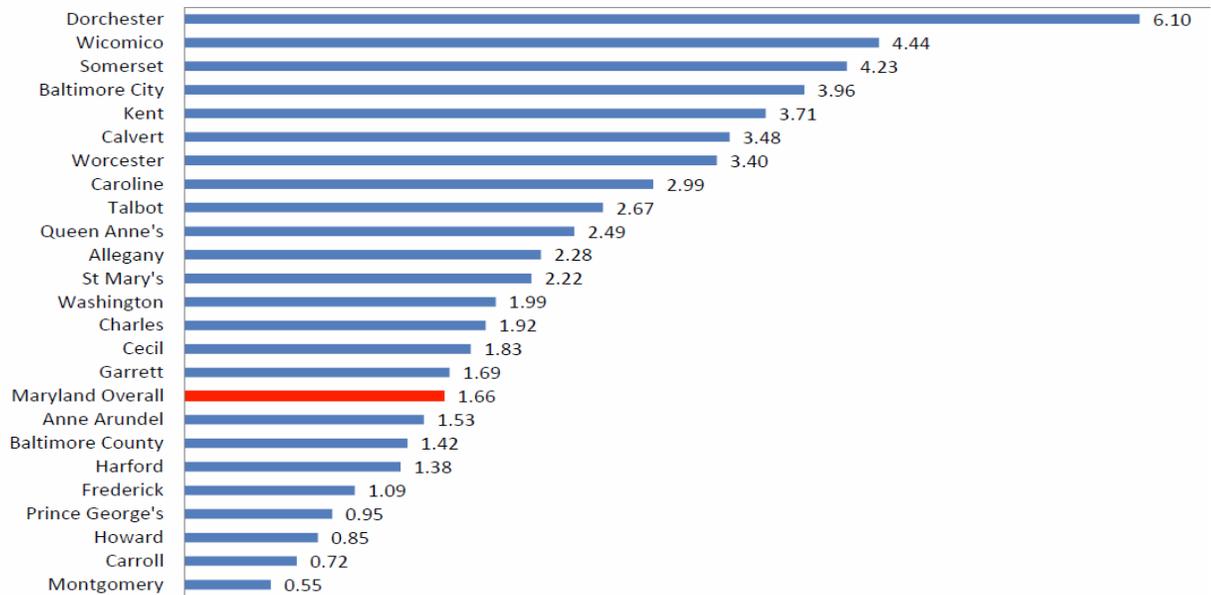
Alcohol

Alcohol (Primary Substance) Treatment Admissions in FY2012 per 1000 Population



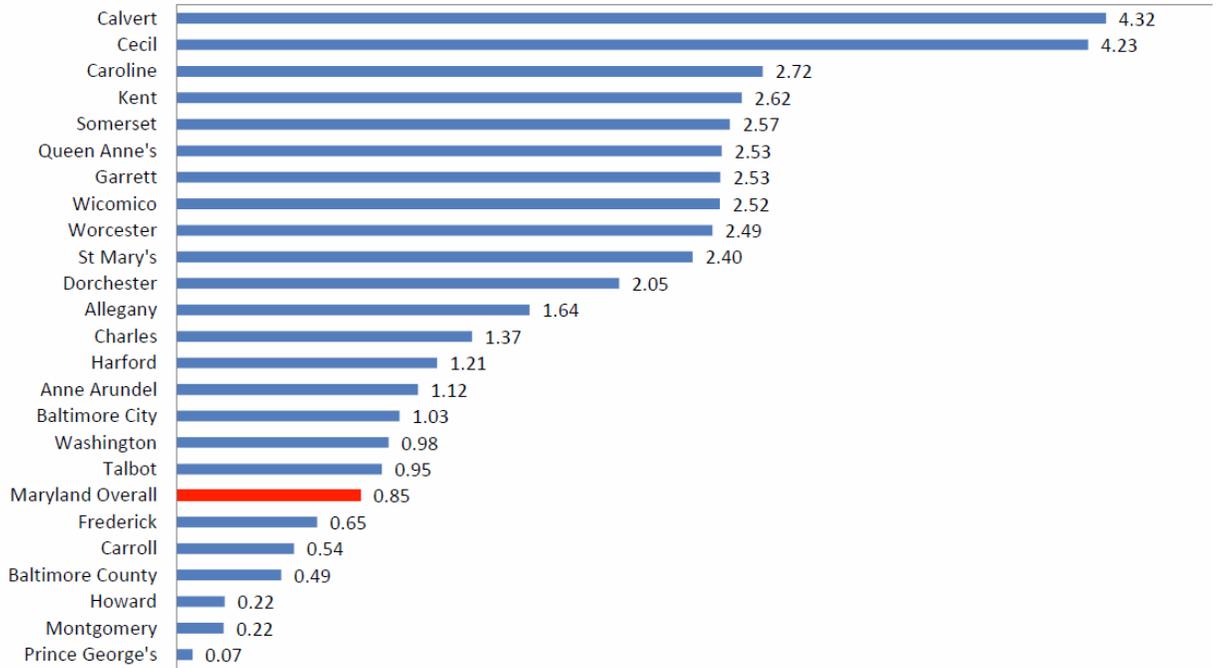
The FY2012 Charles County marijuana treatment admission rate into a state program was 1.92 per 1000 population. The Maryland state rate was 1.66 per 1000 population.

Marijuana (Primary Substance) Treatment Admissions in FY2012 per 1000 Population



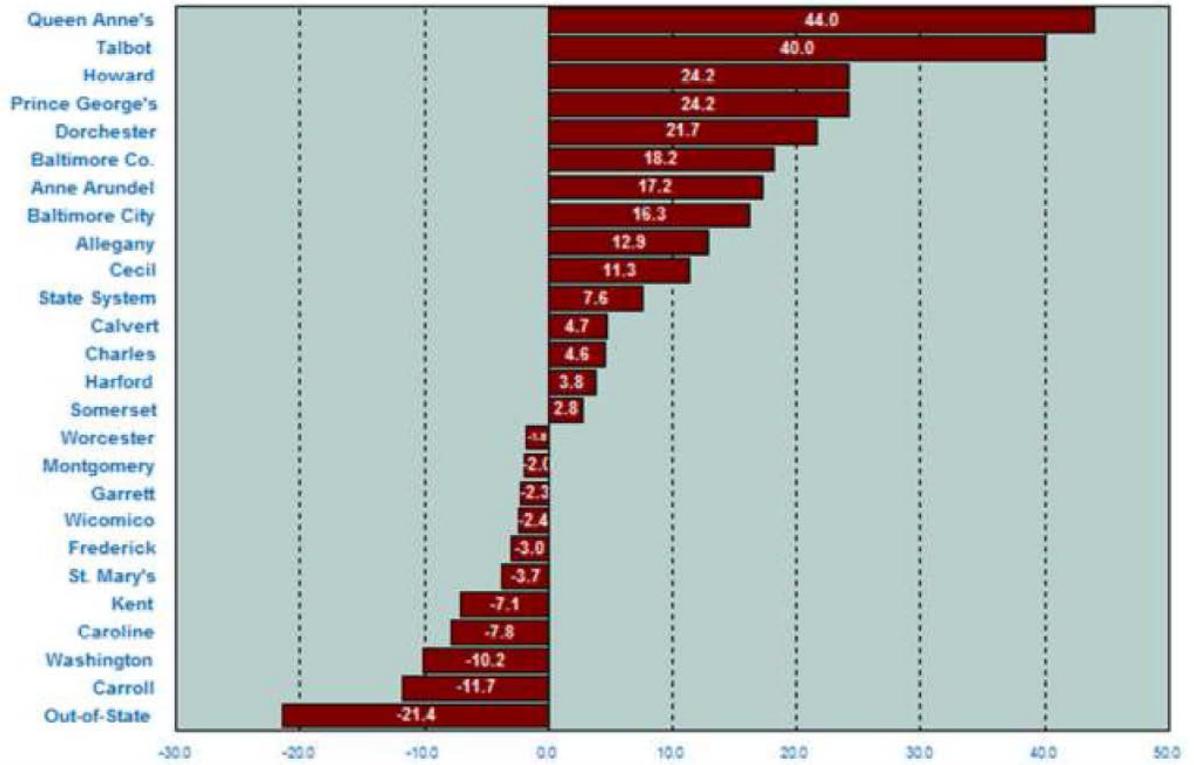
The FY2012 Charles County prescription Opioid treatment admission rate was 1.37 per 1000 population. This was higher than the Maryland state prescription Opioid treatment admission rate of 0.85 per 1000 population.

Opioids (Primary Substance) Treatment Admissions in FY2012 per 1000 Population



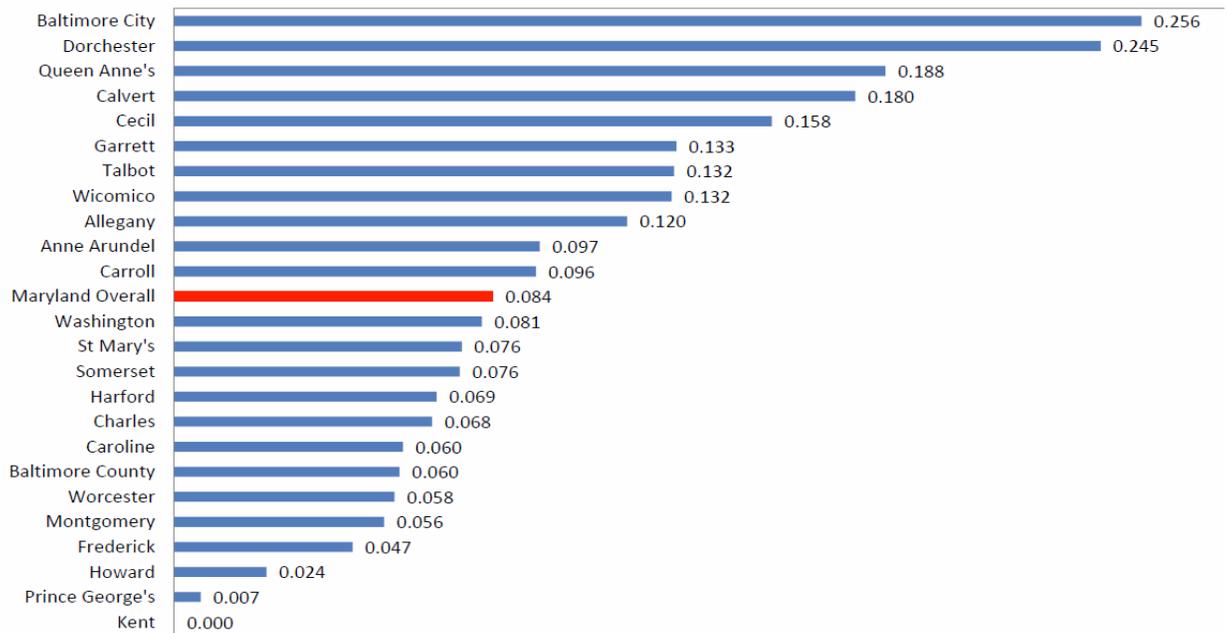
From 2011 to 2012, Charles County saw a 4.6% change in treatment admissions for prescription opiates.

**2011 to 2012 Percentage Change in Prescription-Opioid-Related Admissions to State-Supported Treatment by Patient Residence
Maryland Alcohol and Drug Abuse Administration**



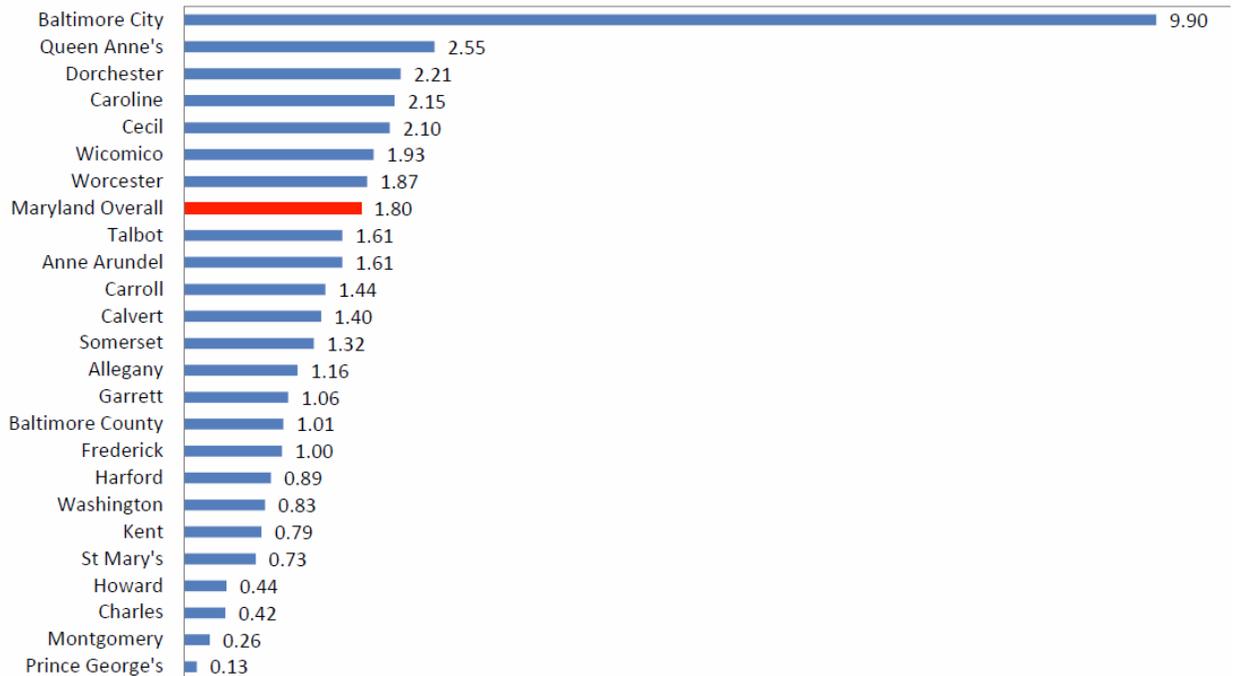
The FY2012 Charles County benzodiazepine treatment admission rate was 0.068 per 1000 population. This is below the Maryland state rate of 0.084 per 1000 population.

Benzodiazepines (Primary Substance) Treatment Admissions in FY2012 per 1000 Population



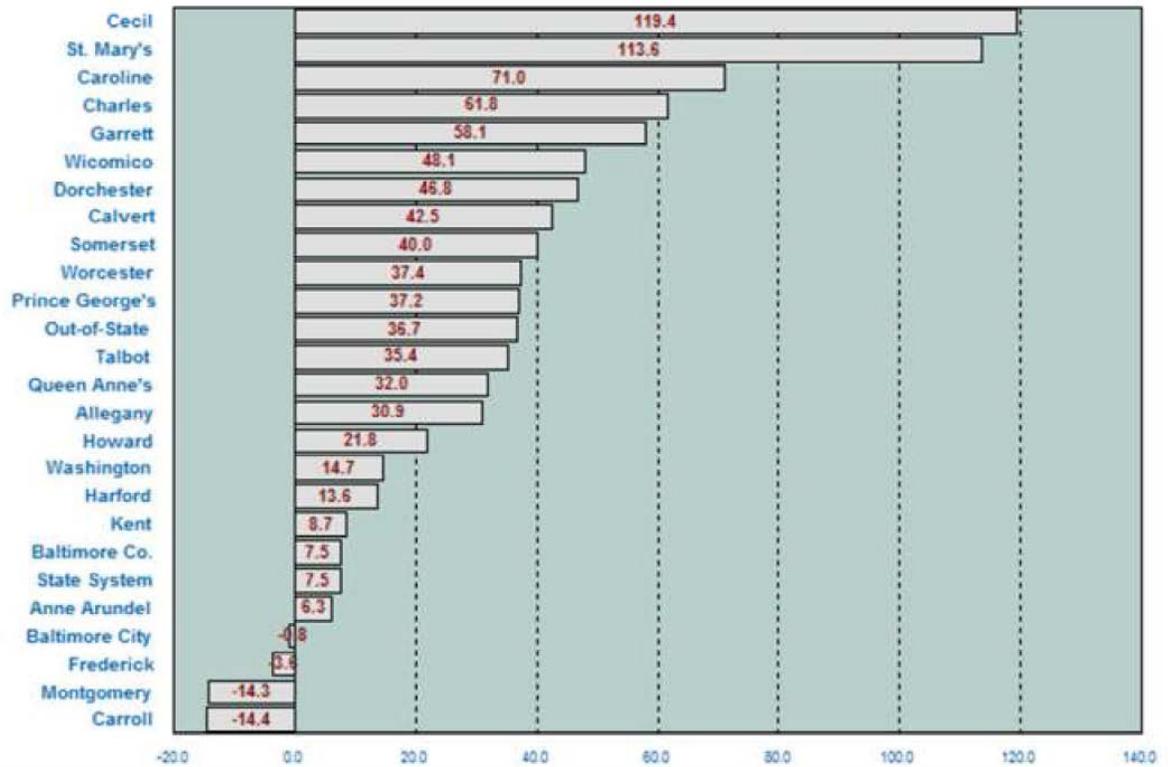
The FY2012 Charles County heroin treatment admission rate was 0.42 per 1000 population. This is below the Maryland state rate of 1.80 per 1000 population.

Heroin (Primary Substance) Treatment Admissions in FY2012 per 1000 Population



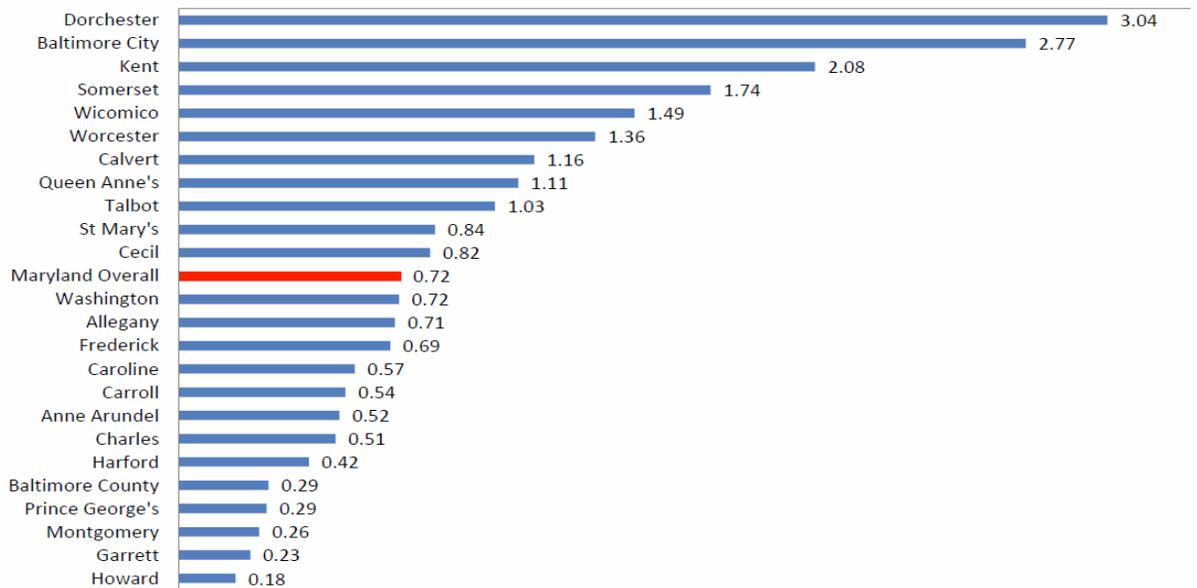
Between 2011 and 2012, Charles County had a 61.8% change in heroin-related treatment admissions. This was the third largest percent change in the state of Maryland.

2011 to 2012 Percentage Change in Heroin-Related Admissions to State-Supported Treatment by Patient Residence Maryland Alcohol and Drug Abuse Administration



The FY2012 Charles County cocaine treatment admission rate was 0.51 per 1000 population. This is below the Maryland state rate of 0.72 per 1000 population.

Crack/Cocaine (Primary Substance) Treatment Admissions in FY2012 per 1000 Population



Charles County Drug-Induced Death Data:

From 2007-2016, Charles County saw 174 deaths due to drug intoxication. 77 of those deaths were opiate-related. That represents 90% of the drug intoxication deaths for the county. There was a large jump in intoxication from 22 in 2015 to 45 in 2016. A large number of those deaths were due to heroin and fentanyl. Heroin deaths went from 8 in 2015 to 22 in 2016. Fentanyl went from 4 deaths in 2015 to 17 deaths in 2016.

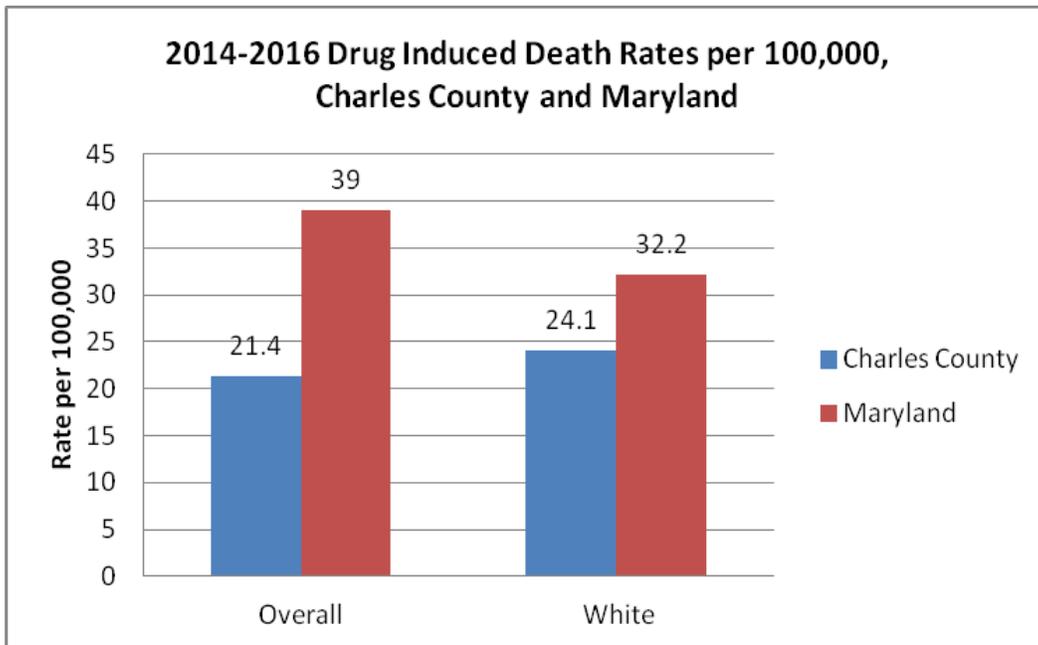
The 2011-2015 age-adjusted unintentional intoxication death rate for Charles County was 11.7 per 100,000. This was the 5th highest rate among the Maryland jurisdictions.

Charles County Drug Intoxication Deaths 2007-2016	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Total Drug and Alcohol Related Deaths	13	16	11	13	11	13	9	21	22	45
Heroin-Related Deaths	2	5	3	6	6	5	5	10	8	22
Prescription Opiate Related Deaths	6	6	7	4	5	7	5	9	8	10
Cocaine-	3	3	2	2	1	1	0	0	2	4

Related Deaths										
Alcohol-Related Deaths	5	5	1	4	3	2	4	5	4	12
Fentanyl-Related Deaths	0	0	0	0	1	1	3	1	4	17

The 2014-2016 average Charles County age-adjusted drug induced death rate was 21.4 per 100,000 population. This rate is less than the Maryland state average rate of 24.1 per 100,000 population. The 2014-2016 Charles County White drug-induced death rate was 39.0 per 100,000 and was higher than the Maryland state average rate of 32.2 per 100,000. Rates for other races were not calculated on a county level due to small case counts.

The Charles County drug induced death has increased greatly since the previous needs assessment. The 2010-2012 Charles County drug induced death rate was 11.2 per 100,000 and has now risen to 21.4 for 2014-2016. The Charles County White drug induced death rate also rose from 17.3 in 2010-2012 to 39.0 in 2014-2016.



Maryland Youth Risk Behavior Survey:

Charles County middle and high schools students participated in the 2016 Maryland Youth Risk Behavior Survey (YTRBS) to determine any changes in the percentage of children engaging in high risk behaviors that can lead to chronic and infectious disease conditions. All responses have been weighted to reflect the county's school aged population.

Charles County middle and high school students were asked if they have ever tried substances one or more times in their life. The most commonly used substances for both middle and high schools students were alcohol (26.4% middle and 54.1% high school) and marijuana (9.3% middle and 33.0% high school).

Alcohol was the most commonly reported substance for high school students (54.1%). Lifetime usage percents increased for those in 12th grade (67.2%) and Whites (63.5%).

Marijuana is the second most commonly reported substance for high school students (33.0%). Lifetime usage percents increased for students 18 years of age and older (45.9%) and those in the 12th grade (47.7%).

Substance Lifetime Usage Rates, 2016 Charles County YRBS	High School Percent Reporting	Middle School Percent Reporting
Alcohol	54.1	26.4
Marijuana	33.0	9.3
Cocaine	7.9	4.3
Sniffed glue, aerosol cans, paint	NA	8.0
Heroin	5.9	NA
Methamphetamine	7.1	NA
Ecstasy	6.9	NA
Steroids	NA	2.2
Prescription drugs without a prescription	17.0	5.0
Injectable illegal drugs	5.0	NA

NA: Not applicable. The question was not asked on the middle school survey.

In addition, Charles County high school students were asked if they have been sold or given illegal drugs on school property in the last year. 23.2% reported that they have been sold or given illegal drugs on school property in the last year. This percent was highest among high school students 18 years of age and older (27%).

One out of four Charles County high school students report using alcohol in the past 30 days (24.1%). Charles County high school students were also asked a question regarding binge drinking. They were asked if they have had 5 or more drinks of alcohol in a row within a couple of hours on one or more of the past 30 days. 11.8% reported binge drinking in the past 30 days. Finally, 19% of high school students reported using marijuana in the past 30 days.

2016 Charles County High School YRBS 30 day usage rates	Percentage Reporting
Alcohol	24.1
Marijuana	19
Binge Drinking	11.8

Maryland Core Drug and Alcohol Survey: College Age Population

The CORE Alcohol and Drug Survey was developed to measure alcohol and other drug usage, attitudes, and perceptions among college students at 2-year and 4-year institutions. Development of this survey was funded by the US Department of Education. The survey includes several types of items about drugs and alcohol. One type deals with the students’ attitudes, perceptions, and opinions about alcohol and other drugs, and the other deals with the student’s own use and consequences of use. For the Southern Maryland Region, the College of Southern Maryland (CSM) administered this survey.

The College of Southern Maryland Safe Communities Center (SAF) administered the CORE long form survey to 708 students enrolled in the La Plata, Prince Frederick, and Leonardtown campuses in spring 2014. SAF administered the survey to students enrolled in General Psychology PSY-1010 and Introduction to Sociology SOC-1010 classes during the spring 2010.

A survey sample size of 349 was achieved at the La Plata campus. This campus is located in Charles County.

For comparison purposes, some figures are included from a reference group of 4787 students from 18 community colleges who completed the CORE Alcohol and Drug Survey (long form) in 2014.

Key findings of the CSM Core Drug and Alcohol Survey include:

Several key findings emerge from the 2014 survey concerning student use/abuse of controlled substances such as tobacco, alcohol, and illegal drugs, as well as associated behaviors and attitudes.

Overall, students experience higher rates of harassment, violence, and assaults when consuming alcohol or drugs shortly before these incidents.

In general, negative behaviors associated with alcohol and drug use among CSM students is showing a decline. Threats of physical violence and actual physical violence that are alcohol and drug related have declined over the past three years.

Fewer CSM students than those in the reference group report problematic consequences of alcohol or drug use such as DWI/DUI, trouble with police or fighting. However, more CSM students than the

reference group have damaged property, tried to commit suicide, or have been hurt or injured as a result of alcohol or drug use.

About one half of CSM students report a hangover as a result of drinking or drug use.

More than one fourth of CSM students get nauseated or vomit; done something they later regret; or have been criticized by someone they know as a result of drinking or drug use.

More than one third of the users report some form of public misconduct at least once during the past year as a result of drinking or drug use.

From 2007 to 2014, all problematic consequences of alcohol and drug use decreased.

At CSM, 18.1% of students report DUI or driving a car while under the influence of alcohol. While this is still an alarming number, this represents a decrease of about 8% since 2007.

More than half of CSM students report consuming alcohol in the past 30 days (51.7%) compared to 61.7% of the reference group.

26% of CSM students report using tobacco in the last 30 days which is lower than the reference group (39.6%) administered the same survey.

The most frequently reported illegal substance used by CSM students as well as the reference group in the past 30 days was marijuana (18.5% CSM, 15% reference group). This represents an increase of 2.6% since 2007.

Trends indicate a CSM decline of tobacco, alcohol, and designer drug use in the past year for the college as a whole. Marijuana and amphetamine use in the last year increased slightly from the last survey administration. 67% of CSM students say they did not use an illegal drug in the last 12 months.

The majority of students feel safe on campus (88.9%).

43% of the underage CSM respondents (fewer than 21 years of age) have consumed alcohol in the past 30 days. This represents a decrease of 12.5 percentage points from 2007.

Binge drinking (5 or more drinks/sitting) is showing a slight decline. Students who report not bingeing in the previous two weeks has increased since 2007 by 7 percentage points. However, one out of every three students who report drinking are binge drinking.

There is a misperception of students actual alcohol use by other students at CSM. 91% of students at CSM believe the average student on campus uses alcohol at least once a week or more, when in fact 59% of students did not drink in the last week.

Percentage with Problematic Consequences of Alcohol and Drug Use Experience (2014):

Consequences of Alcohol/Drug Use:	CSM (%)	Reference Group (%)
Been arrested for DWI/DUI	1.3	2.5
Been in trouble with police, residence hall, college authorities	6.5	12.2
Damaged property, pulled firearms	4.9	6.4
Driven a car while under the influence	18.1	34.3
Got into an argument or fight	24.2	31.6
Tried to commit suicide	2.5	2.2
Seriously thought about suicide	5.1	6.0
Been hurt or injured	13.0	14.0
Been taken advantage of sexually	6.7	10.2
Taken advantage of another sexually	2.0	3.1
Tried unsuccessfully to stop using	5.7	7.0
Thought I might have a drinking or other drug problem	8.4	10.3
Performed poorly on a test or important project	17.3	22.6
Done something I regret later	26.6	33.6
Missed a class	17.9	23.8
Been criticized by someone I know	26.1	27.6

Had a memory loss	24.2	26.1
Got nauseated or vomited	40.0	48.1
Had a hangover	49.4	58.4

Percentage Reporting Substance Use in the Last 30 Days, 2014

Substance Use in last 30 days:	CSM (%)	Reference Group (%)
Tobacco	25.9	39.6
Alcohol	51.7	61.7
Marijuana	18.5	15.0
Amphetamines	3.1	2.5
Designer Drugs	0.9	3.7
Opiates	0.9	0.7

Percentage Reporting Substance Use in the Last Year, 2014

Substance Use in last year:	CSM (%)	Reference Group (%)
Tobacco	33.9	48.1
Alcohol	71.9	80.3
Marijuana	30.9	25.1
Amphetamines	5.4	7.1
Designer Drugs	4.5	3.2

The average number of drinks per week reported was 2.6 drinks. 31.2% reported binge drinking in the past week. 60% reported that they had not drunk in the past week.

Trends in Average Drinks/Binges in Previous 2 Weeks

CSM Alcohol Use Percentages:	2007	2010	2014
Drinks	3.2	2.6	2.2
Binges	37.6	31.2	30.6
None	54.0	60.0	59.0

Trends in the Most Frequently Used Drugs in the Last Year

CSM Substance Use Percentages:	2007	2010	2014
Alcohol	74.8	74.0	71.9
Tobacco	38.7	36.0	33.9
Marijuana	29.0	27.0	30.9
Amphetamines	4.4	4.6	5.2
Designer Drugs	4.6	2.4	4.5

Trends in Students Perceptions: Frequency of Alcohol Use

CSM Alcohol Use Frequencies (%):	2007	2010	2014
Never	6.0	5.0	9.5
Once a week	32.0	32.0	31.0
3 times/week	28.0	30.0	25.3
5 times/ week	10.0	11.0	12.8
Every day	11.0	11.0	9.7

Trends in Students Perceptions: Frequency of Marijuana Use

CSM Marijuana Use Frequencies (%):	2007	2010	2014
Never	12.0	9.0	11.9
Once a week	24.0	24.0	17.7
3 times/week	13.0	17.0	17.6
5 times/ week	7.0	7.0	11.8
Every day	12.0	14.0	18.5

Maryland Behavioral Risk Factor Surveillance System Data:

Alcohol Use Data:

For 2015, 11.7% of Charles County adults reported binge drinking in the last month. Binge drinking was defined as males having more than 5 drinks and females having more than 4 drinks on one occasion. Charles County binge drinking rates were below the Maryland rates for this time period.

2015 Binge Drinking (Males having more than 5 drinks and females having more than 4 drinks in one occasion in the last month), Charles County and MD

<i>Binge Drinking 2015</i>	Yes	No
Charles County	11.7%	88.3%
Maryland	14.2%	85.8%

3.3% of Charles County BRFSS respondents reported that they are chronic drinkers. This is lower than Maryland rates. Chronic drinking was defined as males having two or more drinks and females having one or more drinks every day.

2015 Chronic Drinking (Males having two or more drinks and females having one or more drinks every day), Charles County and MD

<i>Chronic Drinking 2015</i>	Yes	No

Charles County	3.3%	96.7%
Maryland	4.9%	95.1%

Driving Deaths that were alcohol involved:

According to the County Health Rankings, 39% of driving deaths in Charles County from 2012 to 2016 were alcohol involved. This is greater than the Maryland average percentage of 30% for the same time period.

Substance Use Disorder References:

1. 2008-2014 Charles County and Maryland Addictions-Related Emergency Department Visit Rates. Maryland Health Services Cost Review Commission. Accessed through the Maryland State Health Improvement Process website. Available at: http://charles.md.networkofcare.org/ph/ship-detail.aspx?id=md_ship45.
2. 2009-2013 Charles County Zip Code Level Addictions-Related Emergency Department Visit Rates. Maryland Health Services Cost Review Commission. Data requested through the Maryland Virtual Data Unit.
3. Fiscal Year 2012 Maryland County Hospitalization and Emergency Department Visit Rates by Substance. Maryland Health Services Cost Review Commission. Accessed through the Maryland Statewide Epidemiologic Outcomes Workgroup 2014 Maryland Jurisdiction Epidemiological Profiles Chartbook. Available at: <https://www.pharmacy.umaryland.edu/programs/seow/>.
4. Fiscal Year 2012 Maryland County and Charles County Substance Use Treatment Admissions Rate into a state funded program. State of Maryland Automated Records Tracking data. Accessed through the Maryland Statewide Epidemiologic Outcomes Workgroup 2014 Maryland Jurisdiction Epidemiological Profiles Chartbook. Available at: <https://www.pharmacy.umaryland.edu/programs/seow/>.
5. 2007-2016 Charles County and Maryland Drug Intoxication Deaths by Related Substance. Drug and Alcohol Intoxication Deaths in Maryland 2016 Report. Maryland Vital Statistics Administration. Available at: https://bha.health.maryland.gov/OVERDOSE_PREVENTION/Documents/Maryland%202016%20Overdose%20Annual%20report.pdf.
6. 2016 Charles County Middle and High School Substance Use Lifetime and 30 Day Usage Estimates. 2016 Maryland Youth Risk Behavior Survey. Available at: <https://phpa.health.maryland.gov/ccdpc/Reports/Pages/YRBS2016.aspx#Charles>.
7. 2014 Charles County College Age Substance Use Lifetime and 30 day Usage Estimates and Risk Behavior Data. 2014 Charles County CORE Alcohol and Drug Survey. Data provided by the College of Southern Maryland.

8. 2015 Charles County and Maryland Adult Binge and Chronic Drinking Estimates. Maryland Behavioral Risk Factor Surveillance System. Available at www.marylandbrfss.org.

9. Alcohol driving death percentages for Charles County and Maryland. Robert Wood Johnson Foundation's County Health Rankings. Available at countyhealthrankings.org.

Qualitative Data Relating to Substance Use and Tobacco:

On the long survey, Drug Use was seen as the most serious health problem in Charles County. 66% of respondents felt that Drug Use was a serious problem in Charles County. 96% of long survey respondents felt that drugs use is a problem on some level in the county.

44% of the long survey respondents felt that Alcohol Use is a serious problem in Charles County. This was the 3rd most serious health problem reported on the long survey. Additionally, 79% of the long survey respondents felt that alcohol use is a problem on some level.

Tobacco Use was cited as a serious health problem by 41% of the long survey respondents. 77% of long survey respondents felt that tobacco use is a problem on some level in Charles County.

When asked if they have seen improvements among many health issues, tobacco use was the second most common answer, with 29.89% reporting they have seen improvements. 19.22% reported seeing improvements in terms of substance use disorders in Charles County.

When looking at behavioral risk factors applicable to substance use disorders and tobacco use:

- 1.3% reported that they always or most of the time drink three or more alcoholic beverages per day and 6.6% reported that they sometimes drink three or more alcoholic beverages per day.
- 1.2% reported that they drink 5 or more drinks in one sitting always or most of the time. 27% reported that sometimes or rarely they drink 5 or more drinks in one sitting.
- 12% reported that they currently smoke cigarettes to some degree. This is a decrease from the 16% reported in the last needs assessment. 5% reported that they always smoke cigarettes.
- 1.8% of the respondents reported using smokeless tobacco.
- 4% have used e-cigarettes.
- 28.8% reported that they are exposed to secondhand smoke at home or work to some degree.
- 1% misuse prescription drugs on some level whether it is always, most of the time, sometimes, or rarely.
- 1% reported that they have used illegal drugs.
- 4.5% reported use of marijuana

On the short survey, 53% of total short survey respondents felt that Drug and Alcohol Use was the biggest health problem in Charles County. This was the most commonly reported health issue on the short surveys. 36% of the short survey respondents felt that Smoking and Tobacco Use was the biggest health problem in Charles County. This was the fifth most commonly cited health problem on the short surveys.

Behavioral Health and substance use disorders were discussed heavily at all county focus groups. Many of the focus groups involving community leaders and stakeholders talked about the need for additional services and providers for behavioral health in Charles County. It can be hard on families when someone is in need of intensive inpatient treatment for a substance use disorder and must leave the county for care. They are separated from their families and their support system. It can be difficult for the families to see them due to lack of transportation. Participants also talked about the waiting lists to get into substance use treatment services in the county. People can change their mindset in the weeks it takes to get into treatment.

Focus group participants felt that substance use disorders are a health problem increasing in the county youth population. Kids have access to illegal drugs and prescription drugs. They are popping pills and having pill parties where they bring pills they found in their homes. The school nurses reported that they are starting to see issues in the elementary schools. Kids have brought drugs to school that they found in home such as ecstasy.

One of the biggest themes to emerge out of discussions surrounding substance use disorders is the impact on the entire family. It is not an illness that affects just the person. The effects from drug use spread to the entire family. It is a crisis for all family members not just the one addicted. They can be separated while they are in inpatient treatment. They can be affected financially due to the inability to hold down a job or because the person addicted must steal from family to pay for their drugs.

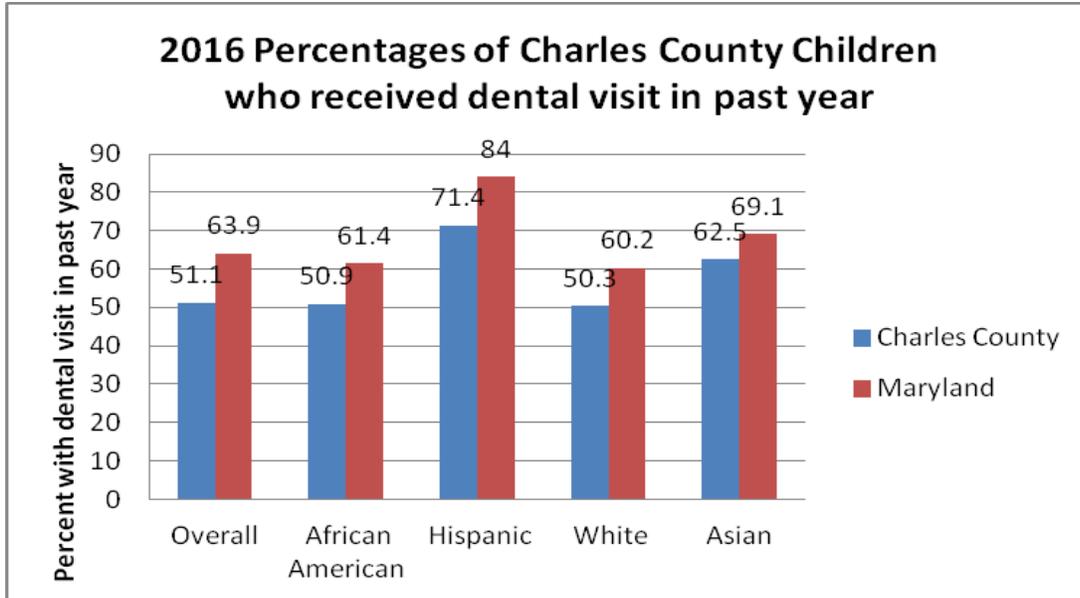
Focus group participants did feel that some improvements have been made in the county to address substance use disorders. Emergency department providers are changing their prescribing practices to give out only 4-5 days of pain medication. This is enough to get patients in with their primary care doctors or specialists who can help them manage chronic pain. We are limiting the amount of narcotics in the community by only prescribing what is needed. The prescription drug monitoring program is also a good way for doctors and pharmacists to look at patients to see if they have had any recent refills or new prescriptions for opiates or narcotics.

Key informant interviews discussed the need for all county agencies to collaborate and work together to address substance use disorders. It is not a law enforcement problem. Programs such as the peer recovery coaches change the response of law enforcement to overdoses. They are able to assist the person into treatment and follow them through the recovery process and hopefully help them to avoid the criminal justice system.

Charles County Oral Health Statistics:

Routine Dental Health for Children:

In 2016, only 51.1% of Charles County children enrolled in Medicaid had a dental visit in the past year. This is the lowest reported percentage in the state of Maryland. It is much lower than the Maryland state average percentage of 63.9%. Rates were highest among Charles County Hispanics at 71.4% and lowest among Charles County Whites at 50.3%.



Source: 2016 Maryland State Health Improvement Process

Routine Dental Care for Adults:

The Maryland Behavioral Risk Factor Surveillance System asked 2 questions regarding oral health. The Charles County BRFSS data for 2015 has been evaluated below.

How long since you last visited a dentist for any reason?

The majority of the Charles County participants reported that they had seen a dentist in the last year (77.2%).

Charles County	Amount of	Time Since	Last Dentist	Visit for any	Reason	(%)
BRFSS	Never	< 1 year	1-2 years	2-5 years	>5 years	Total
2015	**	77.2%	**	**	**	100%

** Percentages cannot be calculated due to small case counts.

Number of Permanent Teeth Removed:

Half of the Charles County BRFSS participants have not had any of their permanent teeth removed (48.9%). 39.5% reported that they have had 1-5 teeth removed.

<i>Charles County</i>	Number of	Permanent	Teeth	Removed	(%)
BRFSS	None	1-5 teeth	6 or more, but not all	All	Total
2015	48.9%	39.5%	9.3%	**	100%

** Percentages cannot be calculated due to small case counts.

Oral Cancer Statistics:

Oral Cancer Incidence:

The Charles County oral cancer incidence rate for 2010-2014 was 10.0. This rate is comparable to the Maryland state average rate of 10.5. The Charles County oral cancer incidence rate is between 10% below and 10% above the United States rate of 11.2 per 100,000.

There is a disparity in oral cancer incidence in Charles County. Charles County Whites had a much higher rate of oral cancer incidence than Charles County African Americans. (11.5 vs. 7.2). Additionally, males are disproportionately affected by oral cancer compared to women.

Oral Cancer Mortality:

For 2010-2014, the Charles County oral cancer mortality rate was 3.3 per 100,000. This is greater than the Maryland state average rate of 2.3 per 100,000 and the United State national rate of 2.5.

Even for a combined time period of 2010-2014, deaths due to oral cancer are few, and rate calculations by race and gender were not possible.

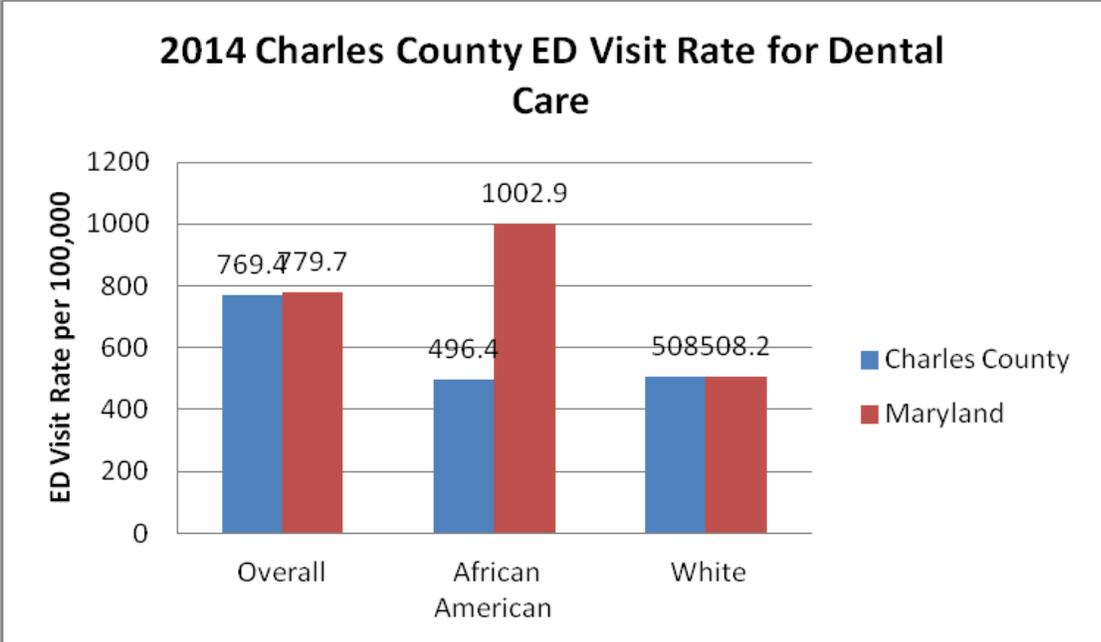
Source: Maryland Department of Health: 2017 CRF Program's Cancer Report

2016 Maryland Oral Health Legislative Report:

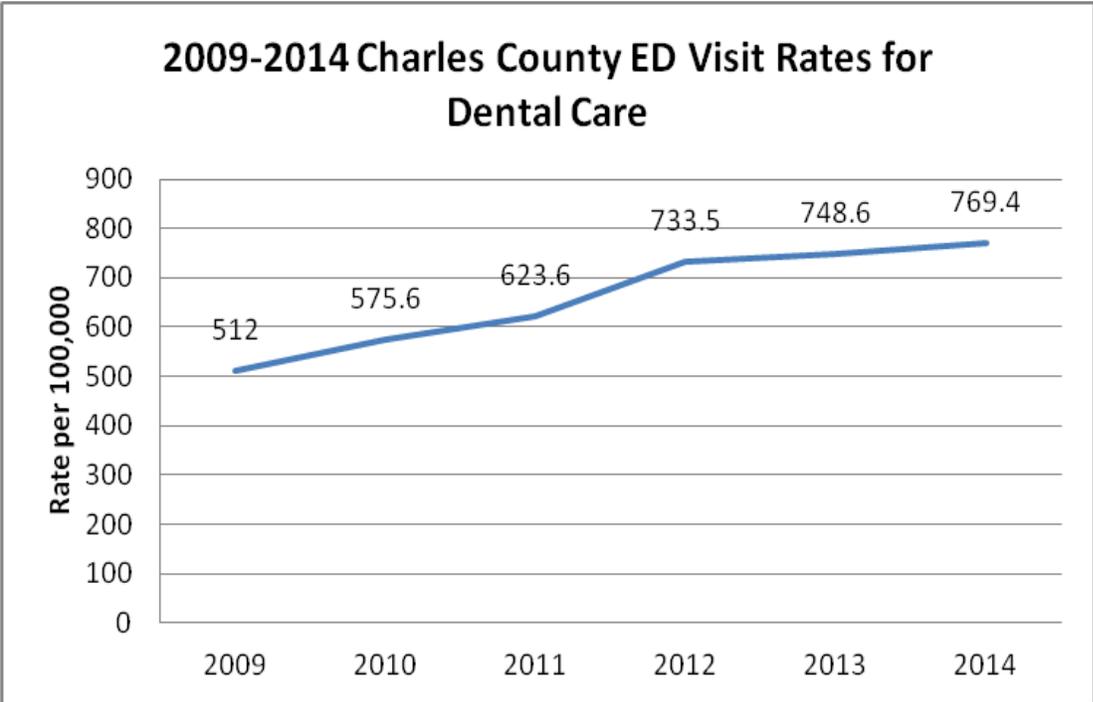
The number of dentists in Southern Maryland participating in medical assistance has increased over the last 5 years. Southern MD increased from 29 dentists in 2009 to 68 dentists in 2016 who participate in DentaQuest (medical assistance and MD Healthy Smiles Program). This represents 44% of the total dentists in the county. This is an increase from the 36.2% reported in the last needs assessment.

2014 Emergency Department Visit Rates for Dental Care:

The 2014 Charles County ED visit rate for dental care was 769.4 per 100,000. This is similar to the Maryland state average rate of 779.7 per 100,000. For Charles County, the ED dental visit rate was higher for White vs. Blacks, however, the differences are not significant like those seen on a state level.



The Charles County ED visit rate for dental care has increased every year from 512 per 100,000 in 2009 to 769.4 in 2014.



Rate of population to dentist:

The 2016 dentist ratio in Charles County was 1420:1. This is greater than the Maryland population to dentist ratio of 1320:1.

Dental Health References:

1. 2016 Charles County Percentages of Children with Dental Visit in past year. Medicaid data 2016 for Maryland. Accessed through the Maryland State Health Improvement Process website. Available at: <http://charles.md.networkofcare.org/ph/ship.aspx#cat5>.
2. 2015 Charles County Dental health data. Maryland Behavioral Risk Factor Surveillance System. Maryland Department of Health and Mental Hygiene. Available at www.marylandbrfss.org.
3. 2010-2014 Charles County Oral Cancer Incidence and Mortality Rates. 2017 Maryland Cigarette Restitution Fund Program's Cancer Reports. Maryland Department of Health. Available at: [https://phpa.health.maryland.gov/cancer/SiteAssets/Pages/surv_data-reports/2017_CRF_Cancer_Report_\(20170827\).pdf](https://phpa.health.maryland.gov/cancer/SiteAssets/Pages/surv_data-reports/2017_CRF_Cancer_Report_(20170827).pdf).
4. Charles County Medicaid dental provider data. 2016 Maryland Annual Oral Health Legislative Report. Available at: <https://mmcp.health.maryland.gov/Documents/JCRs/2016/dentalJCRfinal11-16.pdf>.
5. 2014 Charles County and Maryland Emergency Department Visit Rates for Dental Care. Maryland Health Services Cost Review Commission Outpatient Discharge File. Accessed through the Maryland State Health Improvement Process website. Available at: <http://charles.md.networkofcare.org/ph/ship.aspx#cat5>.
6. 2016 Charles County dentist to population ratio. Area Health Resource File. Robert Wood Johnson Foundation's County Health Rankings. Available at: countyhealthrankings.org.

Qualitative Data Related to Dental Health:

84.2% of the long survey participants reported that they have dental insurance. 18.53% reported that they travel outside of Charles County for their dental appointments.

63% of long survey participants reported that dental health is a problem on some level in Charles County. 24% felt that it was a "serious problem" in the county.

19% of the short survey participants felt that dental health is one of the biggest health problems in Charles County. When asked if services are available to address the issue, 47% felt that many or some services are available in the county for dental health.

Focus group participants discussed the fact that dental coverage is provided to children through the Maryland medical assistance; however, medical assistance does not cover dental services for adults.

Strengths in the county include the Charles County Department of Health's dental program and the Health Partners dental clinic. Health Partners will begin providing dental services in the western part of

the county that is geographically isolated to eliminate the barrier of transportation to services. Both Health Partners and the health department dental clinics serve the medically underserved populations and will see patients regardless of ability to pay.

Approximately 1/5 of the short surveys were collected at the Southern Maryland Mission of Mercy weekend. Mission of Mercy is a volunteer-based dental clinic that provides free dental services over a two day period. The event was conducted at North Point High School in Waldorf, Maryland. Participants felt that free clinics, such as Mission of Mercy, are vital and necessary. Dental health issues can decrease quality of life and affect all aspects of an individual’s health and wellbeing.

Summary Statistics of Southern Maryland Mission of Mercy 2016 Clinic:

Number of SMMOM Patients: **819**

State Information	
Maryland	780
Virginia	26
District of Columbia	10
Delaware	2
Not Listed	1
Total	819

MD Counties Information	
Charles County	246
St. Mary's County	226
Prince George's County	174
Calvert County	70
Montgomery County	39
Anne Arundel County	10
Baltimore County	6
Howard County	4
Frederick County	2
Baltimore City	1
Carroll County	1
Talbot County	1
Total	780

Ethnicity	
Hispanic or Latino	75
Not Hispanic or Latino	311
Blank	433
Total	819

Race	
Black or African American	383
White	327
American Indian or Alaska Native	28
Asian	13
Don't Know	8
Native Hawaiian or Other Pacific Islander	4
Not Listed	81
Total	844

Gender	
Female	516
Male	302
Not Listed	1
Total	819

Male - Age Information	
19-29	60
30-39	66
40-49	61
50-59	57
60-69	35
70+	23
Total	302
Female - Age Information	
19-29	111
30-39	90
40-49	90
50-59	107
60-69	83
70+	35
Total	516
Total - Age Information	
19-29	171
30-39	156
40-49	151
50-59	165
60-69	118
70+	58
Total	819

Charles County Mental Health Statistics:

Maryland Behavioral Risk Factor Surveillance System:

The Maryland Behavioral Risk Factor Surveillance System (BRFSS) is an ongoing telephone surveillance program designed to collect data on the behaviors and conditions that place Marylanders at risk for chronic diseases, injuries, and preventable infectious diseases.

The data collected are used to characterize health behaviors, ascertain the prevalence of risk factors, and target demographic groups with increased needs. Knowing the type and frequency of health issues and risky behaviors enables the public health professionals to devise and implement programs geared toward the prevention of chronic diseases, injury, and disability.

Charles County data has been extracted for questions pertaining to mental health, quality of life, emotional and social support, and anxiety/depression. Charles County BRFSS data is available for 2014 and 2015. When 2015 BRFSS was not available, the 2014 BRFSS database was queried for Charles County level data.

Question 1: Has a doctor ever told you that you had an anxiety disorder (including acute stress, anxiety, obsessive compulsive, panic, phobia, PTSD, or social anxiety)?

For 2014, approximately 12.7% of Charles County BRFSS respondents reported that they have been diagnosed with an anxiety disorder. A county level estimate was not available for 2015 BRFSS.

<i>Question 1: Anxiety disorders 2014</i>	Yes	No
Charles County	12.7%	87.3%
Maryland	13.3%	86.7%

Question 2: Has a doctor ever told you that you had a depressive disorder (including depression, major depression, dysthymia, or minor depression)?

For 2015, approximately 12.4% of Charles County BRFSS respondents reported that they have been diagnosed with depression.

<i>Question 2: Depressive disorders 2015</i>	Yes	No
Charles County	12.4%	87.6%
Maryland	16.3%	83.7%

Question 4: Number of mental health days not good

The 2015 Charles County BRFSS results found that approximately one-quarter of county residents (27.3%) had experienced days in the past month where their mental health status was not good.

Data from the 2016 BRFSS found that Charles County residents reported an average of 3.5 mental unhealthy days in the past month.

Question 4: Mental health days not good 2015	1-2 days	3-7 days	8-29 days	30 days	None
Charles County	9.4%	9.2%	6.7%	**	72.7%
Maryland	9.5%	10.3%	8.9%	4.5%	66.7%

** Percent not calculated due to small case counts.

Question 5: How many days did poor physical or mental health problems keep you from your activities?

The 2015 Charles County BRFSS results found that approximately 16.6% had at least one day in the past month where physical or mental health problems kept them from their activities.

Question 5: Mental/physical health keep you from usual activities 2015	1-2 days	3-7 days	8-29 days	30 days	None
Charles County	2.6%	**	**	**	83.4%
Maryland	5.6%	6.4%	5.5%	3.2%	79.2%

** Percentages cannot be calculated due to small case counts.

Question 6: Because of a physical, mental, or emotion condition, do you have difficulty doing errands alone such as visiting a doctor's office or shopping?

The majority of Charles County BRFSS respondents do not have trouble doing errands alone, such as visiting a doctor or shopping (96.2%).

Question 6: Difficulty doing errands alone 2015	Yes	No
Charles County	3.8%	96.2%
Maryland	5.3%	94.7%

Question 7: Because of a physical, mental, or emotional condition, do you have serious difficulty concentrating, remembering, or making decisions?

Approximately 6.4% of the Charles County participants reported that they do have difficulty concentrating, remembering, or making decisions due to a physical, mental, or emotional condition.

Question 7: Difficulty concentrating 2015	Yes	No
Charles County	6.4%	93.6%
Maryland	8.6%	91.4%

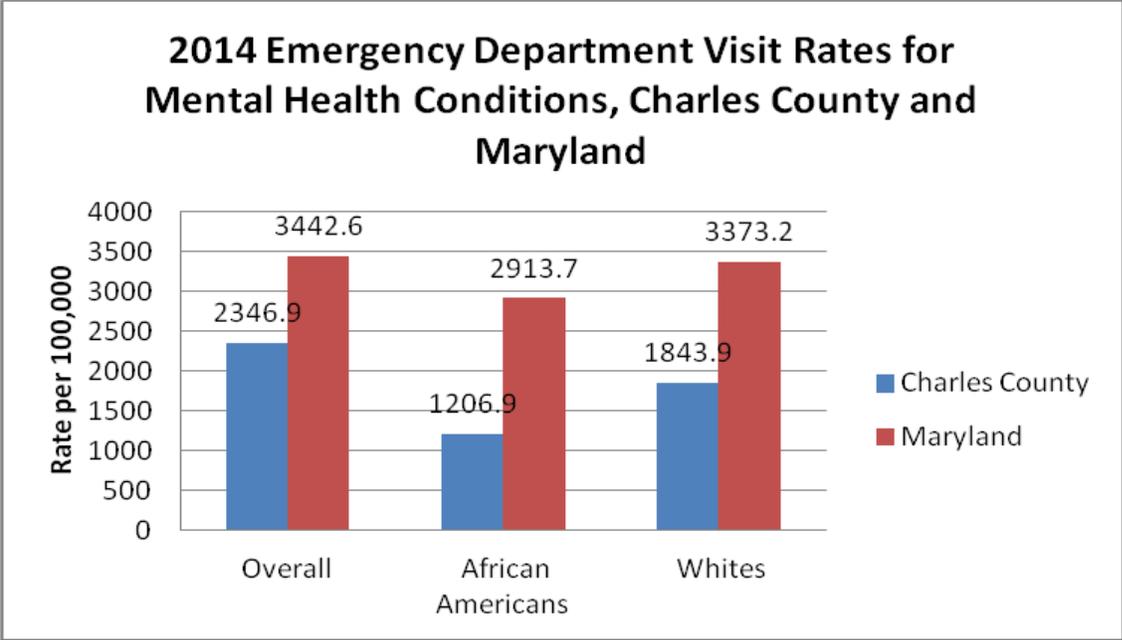
Suicide:

In 2016, there were a total of 19 suicides in Charles County and 581 suicides in the state of Maryland. The 2014-2016 average Maryland Suicide rate was 9.2 per 100,000. A Charles County level suicide rate could not be calculated due to small case counts. Rates less than 25 are unreliable.

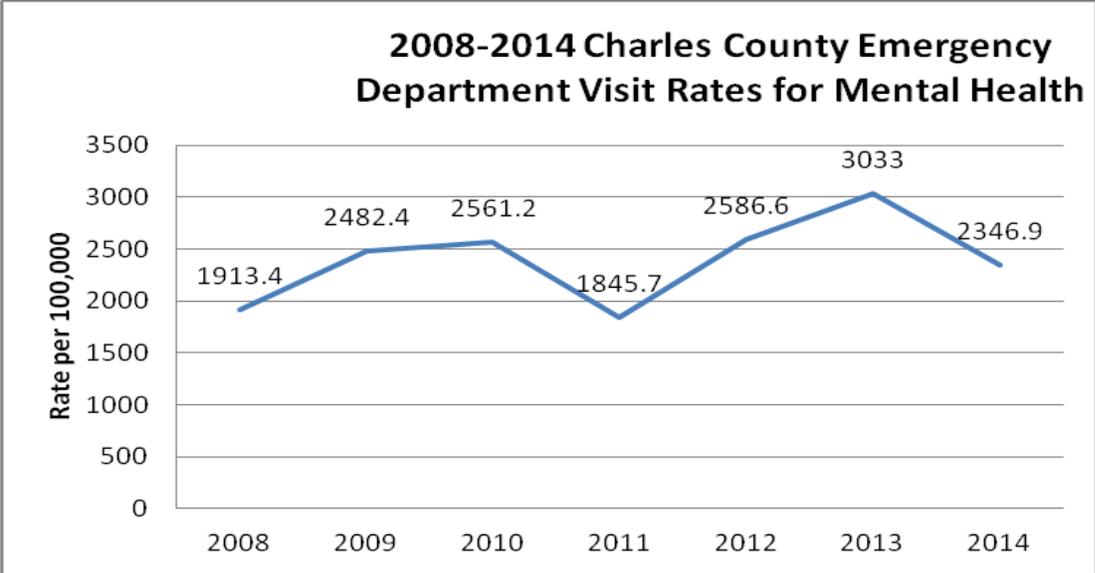
Emergency Department Visit Rates for Mental Health Conditions:

This indicator shows the 2014 rate of emergency department visits related to mental health disorders (per 100,000 population). Mental health problems can place a heavy burden on the healthcare system, particularly when persons in crisis utilize emergency departments instead of other sources of care when available. In Maryland, there were 161,208 mental health disorder-related emergency department visits in 2010. Mental health disorder diagnoses include adjustment disorders, anxiety disorders, attention deficit disorders, disruptive behavior disorders, mood disorders, personality disorders, schizophrenia and other psychotic disorders, suicide and intentional self-inflicted injury and miscellaneous mental disorders.

The 2014 Charles County Mental Health ED Visit Rate was 2346.9 per 100,000. This is below the Maryland state average mental health ED visit rate of 3442.6 per 100,000. The Charles County mental health ED visit rate is the 3rd lowest rate in the state of Maryland. When examining rates by race, Charles County Whites had a higher ED visit rate for mental health than Charles County African Americans (1843.9 vs. 1206.9). This disparity is also seen at the state level.



The ED visit rate for mental health conditions in Charles County has fluctuated yearly since 2008. The 2014 rate is a decrease after the peak in 2013.



Mental health related ED visit rates have increased from 2009-2013 for all Charles County available zip codes. Rates could only be calculated for zip codes with a population greater than 5000 people. Disparities can be seen in mental health ED visits rates by zip code of residence. The highest rates of mental health related emergency department visits are among those living in the zip codes of La Plata (20646) and Indian Head (20640). The zip code with the greatest increase from 2009 to 2013 was La Plata (20646). This may be due to the fact that the county hospital is located within this zip code.

ED Visits Related to Mental Health Conditions per 100,000 Population, 2009-2013

Zip Code	2009	2010	2011	2012	2013
20601	2077.9	2242.8	1668.9	2252.5	2434.4
20602	2772.7	3103.5	2373.8	3070.3	3461.9
20603	1583.0	1757.7	1297.1	1808.1	1872.3
20613	1331.8	1678.7	1498.3	1665.2	1706.5
20616	2286.1	2159.0	1666.4	1768.4	2361.8
20637	1670.5	2233.7	1630.9	2537.0	2418.8
20640	3138.9	2949.8	2294.7	3037.0	3706.2
20646	3315.2	3216.9	2271.5	3448.8	4571.8
20695	2475.8	2738.4	1738.1	2560.5	3009.6

Source: 2009-2013 Maryland HSCRC Outpatient Files

Health Professional Shortage Areas (HPSA) for Mental Health Services in Charles County, Maryland

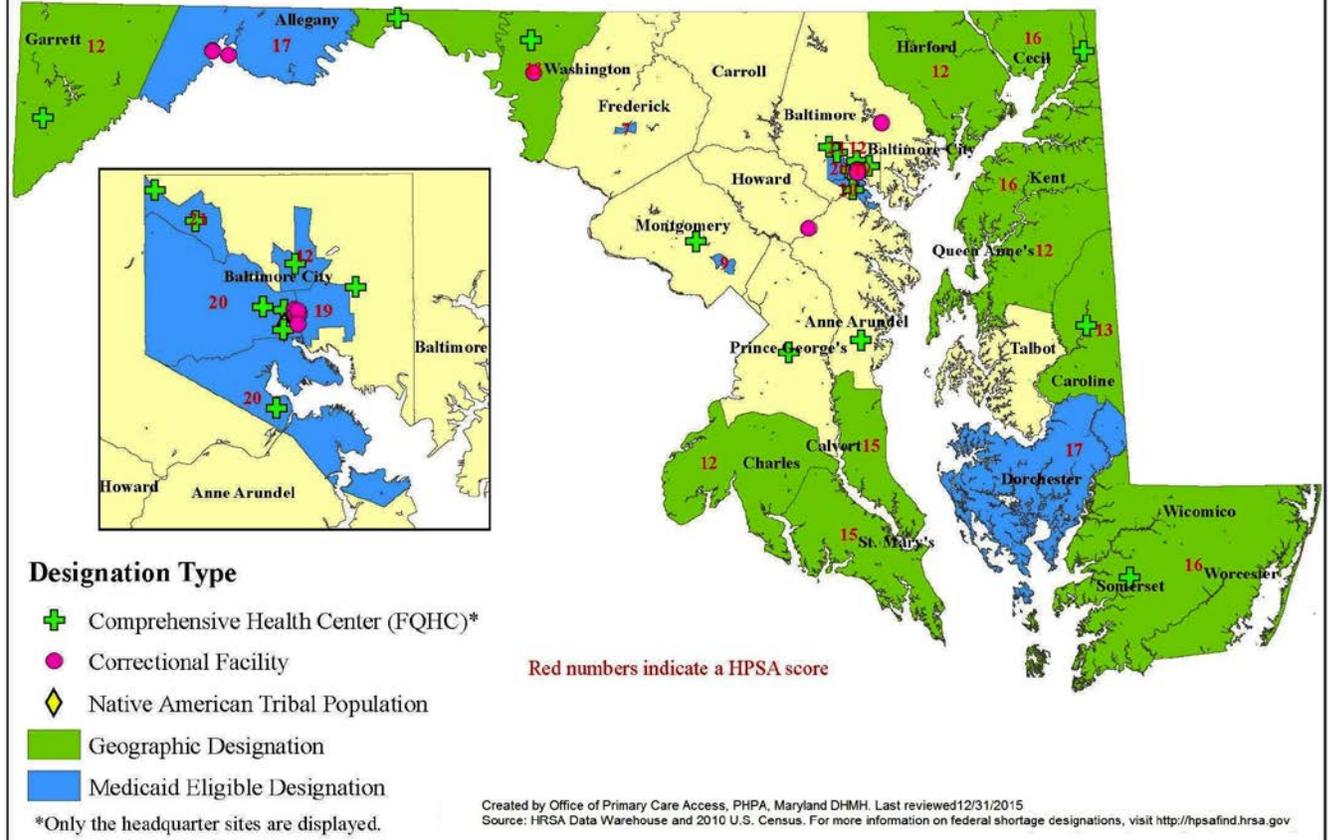
As of October 28, 2017, Charles County is a federally designated health professional shortage area (HPSA) for mental health services. The whole county is designated as a HPSA geographic area, not just one population or facility within the county.

Geographic Areas must:

- Be a rational area for the delivery of mental health services
- Meet one of the following conditions:
 - A population-to-core-mental-health-professional ratio greater than or equal to 6,000:1 and a population-to-psychiatrist ratio greater than or equal to 20,000:1 or
 - A population-to-core professional ratio greater than or equal to 9,000:1 or
 - A population-to-psychiatrist ratio greater than or equal to 30,000:1
- Have unusually high needs for mental health services, and
 - A population-to-core-mental-health-professional ratio greater than or equal to 4,500:1 and a population-to-psychiatrist ratio greater than or equal to 15,000:1, or
 - A population-to-core-professional ratio greater than or equal to 6,000:1, or
 - A population-to-psychiatrist ratio greater than or equal to 20,000:1
- Mental health professionals in contiguous areas are over-utilized, excessively distant or inaccessible to residents of the area under consideration.

The Charles County HPSA score for mental health is 9. The National Health Services Corps uses a scaling system from 1-26 to determine priorities for assignment of mental health clinicians. The higher the score is the greater the priority.

Maryland Health Professional Shortage Area (HPSA) Designations for Mental Health as of 12/31/2015



Information on HPSA designations can be found on the US Health Resources and Services Administration's HPSA website at: www.hpsafind.hrsa.gov/HPSASearch.aspx.

Availability of Mental Health Providers:

The population to mental health provider ratio in Charles County is 790:1. This is well above the Maryland state average ratio of 460:1. The Charles County ratio is the 6th worst ratio in the state of Maryland.

2016 Maryland Youth Risk Behavior Survey:

The 2016 Maryland Youth Tobacco and Risk Behavior Survey (YRBS) asked Charles County middle school students and high school students questions regarding risk behaviors and perceptions of harm. Questions regarding suicide and mental health were included in the survey. Charles County results are presented below.

Suicide:

16.3% of Charles County high school students have considered killing themselves. For both middle and high school students, females were more likely to report that they have considered suicide than males.

Beyond considering suicide, 14.8% of Charles County high school students reported that during the past 12 months they have made a plan about how they would attempt suicide.

Bullying:

19.8% of Charles County high school student reported that they have been bullied at school in the past 12 months.

For high school students, females are more likely to report being bullied than males. Younger students under 15 years of age and 9th grade students had higher rates of bullying than older students in the other grades in high school.

An additional question asked students if they have been electronically bullied in the past 12 months. 15.3% of Charles County high school students reported that they have been electronically bullied in the past 12 months. For high school students, females were more likely to report being electronically bullied than males.

Feeling of Hopelessness:

28.7% of Charles County high school students felt so sad and hopeless almost every day for two weeks or more in a row that they stopped doing some usual activities during the past 12 months. More females reported feeling sad and hopeless than males.

Talking:

- 38.3% talked to a teacher or other adult about a personal problem they had.
- 75.5% felt comfortable seeking help from one or more adults besides their parents if they had a question affecting their life.
- 82.2% have adults outside of school they can talk to about things that are important to them.

Mental Health References:

1. 2014 Charles County and Maryland Anxiety and 2015 Depression Prevalence Estimates, Mental Health data. 2015 Maryland Behavioral Risk Factor Surveillance System. Available at www.marylandbrff.org.
2. 2014-2016 Charles County and Maryland Suicide Rates. Maryland Vital Statistics Administration. Accessed through the Maryland State Health Improvement Process website. Available at: https://health.maryland.gov/vsa/Documents/2016_AnnualReport.WebVersion.pdf.
3. 2008-2014 Charles County and Maryland Emergency Department Visit Rates for Mental Health Conditions. Maryland Health Services Cost Review Commission. Accessed through the Maryland

State Health Improvement Process website. Available at:
<http://charles.md.networkofcare.org/ph/ship.aspx#cat5>.

4. 2009-2013 Charles County Zip Code Level Mental Health Related Emergency Department Visit Rates. Maryland Health Services Cost Review Commission. Data requested from the Maryland Virtual Data Unit.
5. 2017 Charles County Health Professional Shortage Area Designation for Mental Health. US Department of Health and Human Services: Health Resources and Services Administration. October 28, 2017 Health Professional Shortage Area Update. Available at:
<http://hpsafind.hrsa.gov/>.
6. Population to mental health provider ratio. Robert Wood Johnson Foundation's County Health Rankings. Available at countyhealthrankings.org.
7. 2016 Charles County and Maryland Youth Data on suicide, bullying, and mental health status. 2016 Maryland Youth Risk Behavior Survey. Maryland Department of Health. Available at:
<https://phpa.health.maryland.gov/ccdpc/Reports/Pages/YRBS2016.aspx>.

Qualitative Data Relating to Mental Health:

Long Survey Results related to Mental Health:

6.31% of the long survey respondents reported that they travel outside of Charles County to receive behavioral health services.

Respondents were also asked a series of risk and protective factor questions. One question asked respondents if they feel stressed or overwhelmed. 8% reported that they always feel stressed out or overwhelmed. 19% reported that they are stressed most of the time. The greatest group of respondents (44%) reported that they feel stressed out or overwhelmed sometimes. 19% were rarely stressed out, and 2% are never stressed.

39% of the long survey respondents felt that mental health is a serious health issue in Charles County. 75% felt that mental health is a health problem on some level (serious, moderate, and slight). This is an increase from the 66% reported in the last needs assessment.

22.06% of the long survey respondents felt that improvements have been made in Charles County to address mental health services and access.

Short Survey Results related to Mental Health:

34% of the short survey respondents reported Mental Health as one of the biggest health problems in Charles County. This is an increase from the 25% reported in the last needs assessment report.

41% of the short survey participants felt that many or some services are available in the county to address mental health. 5% reported that there were no services available in Charles County for mental health. The most common answer was that "some" services are available.

Focus Groups:

Mental health and access to behavioral health services were major discussion topics at many of the focus groups. The issues discussed have been divided into populations in need, gaps and barriers in services, determinants leading to mental health crisis, and potential improvements and solutions.

Gaps and Barriers to mental health services:

- Child psychiatry
- Wait time in terms of getting services.
- When people have private insurance, they often have to leave the county for services. There are more support services, such as care coordination, for individuals on medical assistance than those with private insurance.
- There needs to be a continuity of care. There is an issue for all adults in the county. Need more psychiatric hours. Some need instant psych hours.
- Some give up, especially when they lose their medical assistance.
- There is a need for increased funding to address the factors leading to barriers in access, like transportation.
- From children and adolescents, we do not have many places to refer. This is especially true for communities on the out skirts of the county like Mt Hope and Nanjemoy. Some residents can't get to Waldorf where services are concentrated.
- There is definitely a need for more mental health services.
- Crisis services for behavioral health are needed to address high ED utilization for mental health conditions.
- Many county agencies have difficulty recruiting and retaining psychiatrists. The health department must hire within the state system, and salaries are not competitive. The hospital also has difficulty in recruiting for psychiatry.
- Individuals who present to the hospital with mental health emergencies must be admitted or transferred.

What specific populations do you see in need of mental health services:

- Homeless population. The school system has seen increases in this population.
- Children, early prevention
- Co-occurring mental health and substance use disorders
- Severe and complicated medical conditions make providers hesitant to deal with their mental health issues.
- Mental health among the aging population. It is difficult to find services and placement.
- Transitional youth aged 18-25 years

Social Determinants leading to increased mental health emergencies and crises:

- Transportation
- Juvenile crime and drug use/drinking
- Safe and stable family life and living situations
- Service agencies stretched beyond their means with waitlists to receive services
- Confusion for those needing services when navigating available services
- Health Care- access to primary and specialty (especially mental health) care
- Homelessness
- Disparities: race, socio-economic, geographic
- Housing, financial stability, hunger

Potential Solutions and Future Programming:

- There is a need for a mobile crisis response team. Accessing mental health is difficult due to transportation. We need mobile units.
- Need crisis beds in Charles County. We can use Calvert County, but they are small and often full. No partial in-patient admissions. Those in crisis use EMT services for mental health conditions and go to the Charles Regional ED, are released, and return the same day. Those who need to be admitted are moved to another hospital. There is no medical psychiatrist at University of Maryland Charles Regional Medical Center and no on-call. All case managers and social workers are contracted through Calvert Memorial Hospital.
- Getting jobs for consumers with mental illness is difficult. There is the Pathways-supported employment program. Providers must refer to this program. The consumers must meet criteria for the program and medical assistance. Many programs are not available to those with private insurance who do not recognize long-term care.
- We need to continuously improve the public mental health workforce. There is a need for additional providers in Charles County.
- Increased child psychiatry services in Charles County.
- Continue collaboration and communication among county agencies and providers to increase access to behavioral health services.
- Increased education to the community to reduce stigma associated with mental health treatment.

Access to Care:

Access to Routine Exams:

From 2015, 76.2% of Charles County Behavioral Risk Factor Surveillance System (BRFSS) respondents reported that they had been to a doctor for a routine checkup in the last year. There were only a few people who reported that they never go to the doctor for routine check-ups.

Time since last routine checkup	Never went	< 1 year	1-2 years	2-5 years	5+ years
Charles County	0.6%	76.2%	13.0%	6.8%	3.4%

2015 Charles County BRFSS respondents were also asked if there was a time in the past 12 months when they were unable to see a doctor when needed due to cost. 4.9% of Charles County residents reported that there was time in the past 12 months when they were unable to see a doctor due to cost. This is below the Maryland state average percentage of 10.8%.

Charles County BRFSS respondents were asked if they have one or people that they think of as their personal doctor or health care provider. The majority of those surveyed (87.0%) reported that they do have a personal doctor or health care provider. This is similar to the Maryland percentage of 85.2%.

Health Status:

2015 Charles County BRFSS data indicates that the health status of most county residents is positive. Over half of county residents report themselves in Very Good to Excellent health (64.6%). A small portion considers their health to be fair to poor (9.4%).

There was an increase in the percentage reporting Very Good to Excellent health from the last needs assessment report (53.2% to 64.4%). There was a decrease in the percentage reporting that they are in Fair or Poor Health (14.3% to 9.4%).

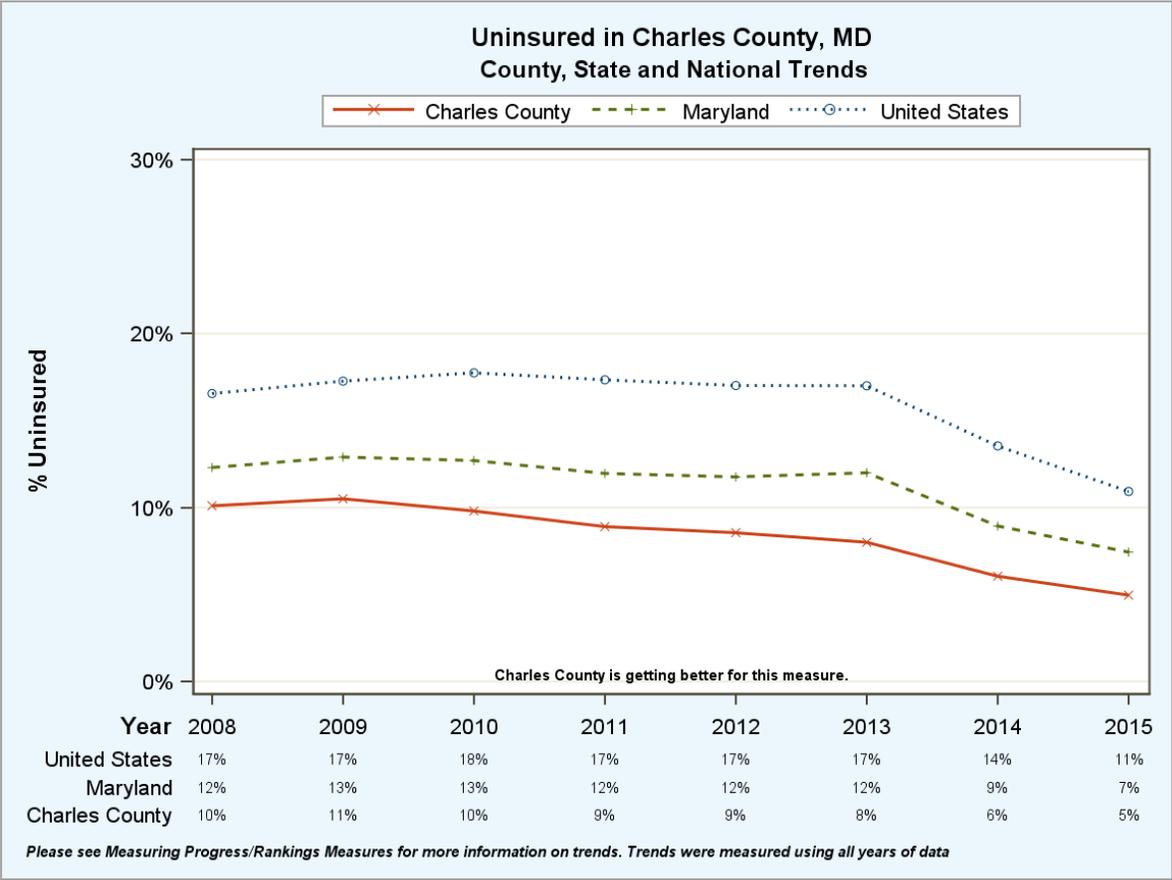
Health Status:	Excellent	Very Good	Good	Fair	Poor
Charles County	25.3%	39.3%	26.0%	7.6%	1.8%

Health Insurance:

The 2015 Charles County BRFSS estimates that 7.4% of county residents do not have health insurance coverage of any kind. This is lower than the 8.7% estimated for the state of Maryland.

Health Insurance Coverage:	No	Yes
Charles County	7.4%	92.6%
Maryland	8.7%	91.3%

2015 Charles County health un-insurance estimate as determined by the US Census Bureau’s Current Population Survey is 5%. This data accessed through the Robert Wood Johnson Foundation’s County Health Rankings. This is lower than the 2013 Charles County health un-insurance rate of 7.4% that was reported in the previous needs assessment report. The 2015 Charles County estimate is below the Maryland state health un-insurance estimate of 7% for 2015.



Uninsured ED visits:

The Maryland State Health Improvement Process measure for the percent of persons without health insurance is based on outpatient claims data provided by the Maryland Health Services Cost Review Commission. The percent of ED visits that were uninsured in Charles County was 8.6% for 2016. This is below the Maryland state average percentage of 10.1%.

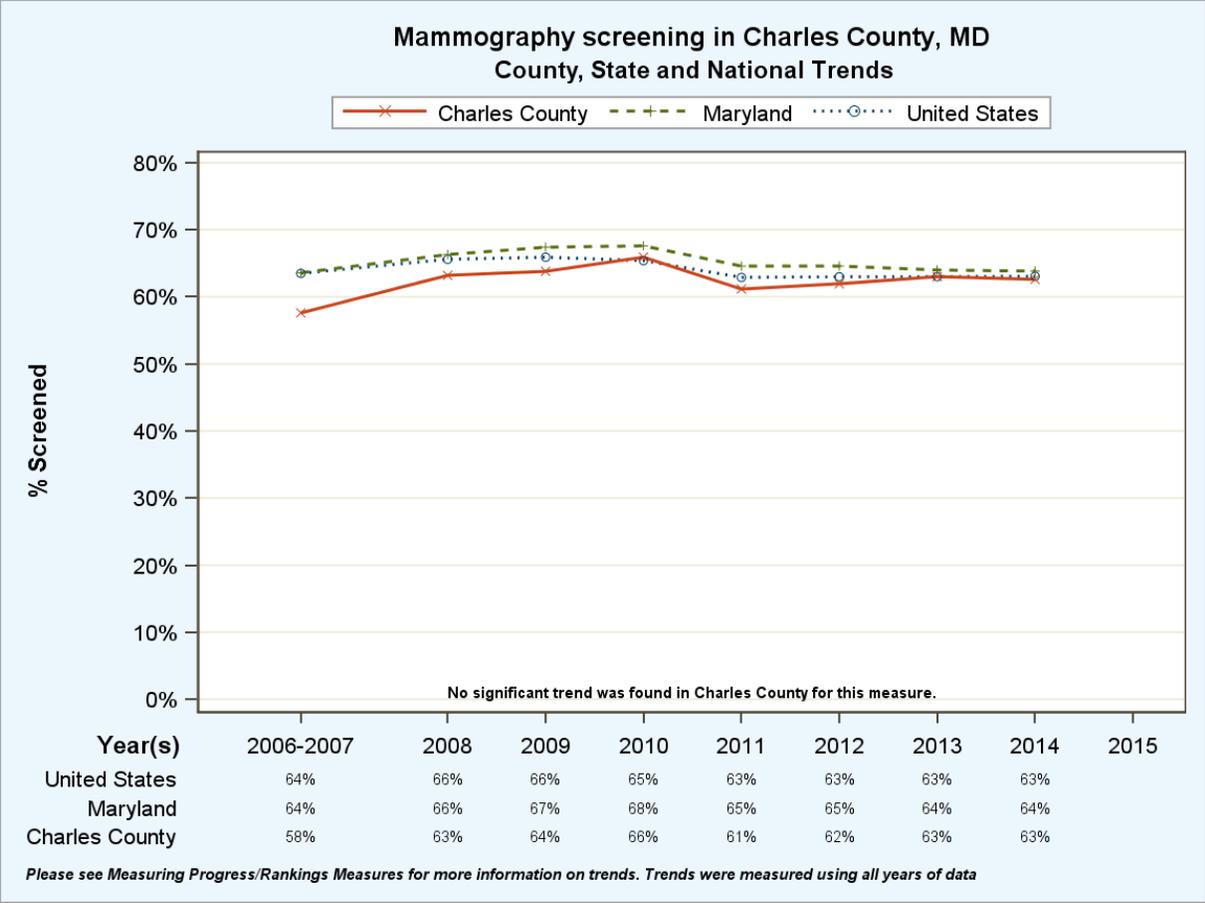
Medicaid Enrollment Rates:

For the past decade, Charles County has seen an increase in the number of persons both eligible for and enrolled in Medicaid. The biggest increases are seen from 2013 to 2014 when Medicaid was expanded in the state of Maryland.

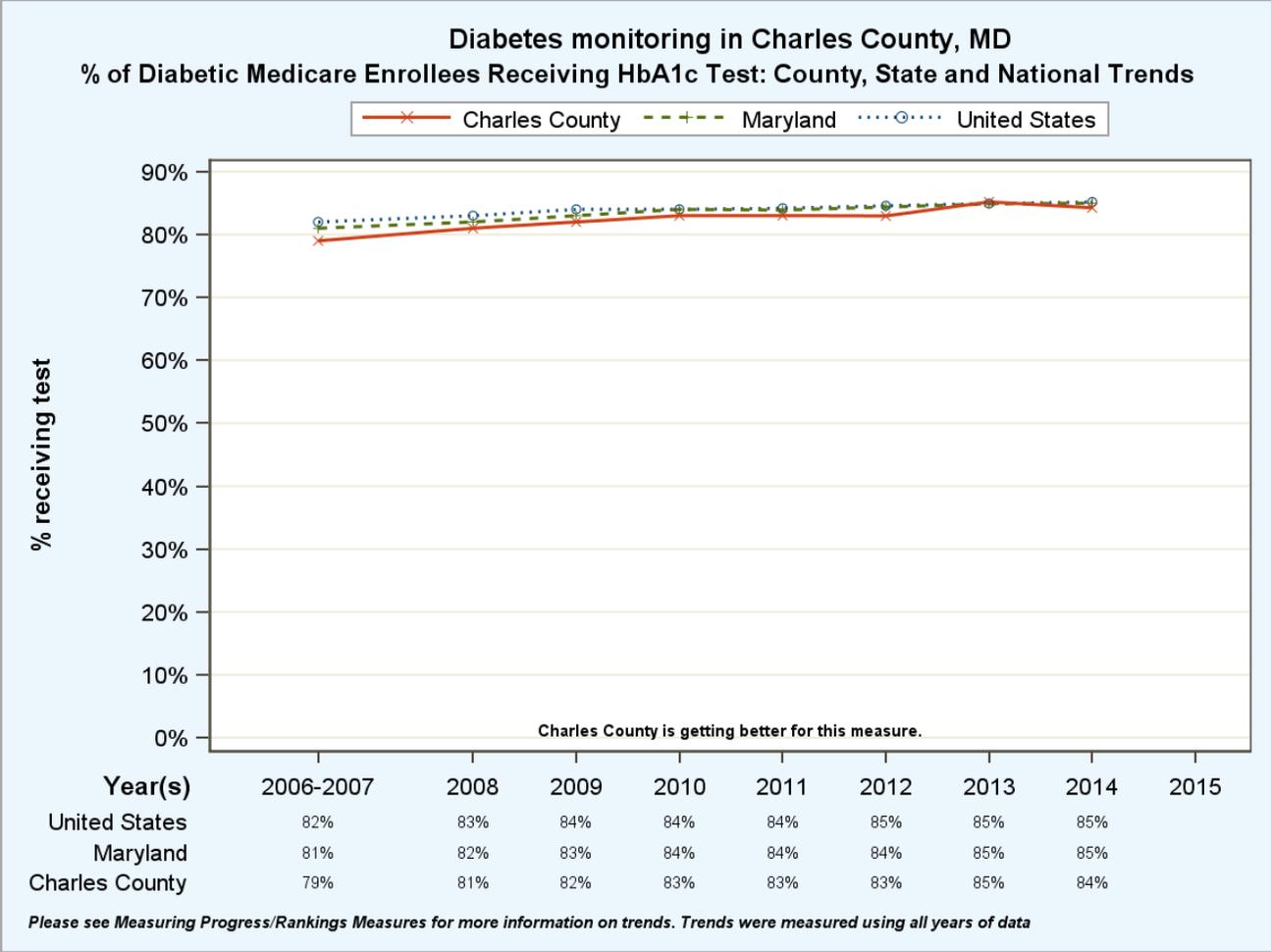
Charles County Medicaid Enrollment and Eligibility	Medicaid Enrollment	Medicaid Eligible
June 2017	26826	31572
June 2016	24542	29724
June 2015	22536	28780
June 2014	23844	28962
June 2013	17083	23108
June 2012	15655	21354
June 2011	14874	19679
June 2010	13388	18043
June 2009	11630	16247
June 2008	9852	14026

Screening Practices:

The Robert Wood Johnson Foundation's County Health Rankings provide roadmaps for each state and its jurisdictions for data measures relating to health outcomes and social determinants of health. One of the health outcomes is access to mammograms health screenings for women aged 67-69 currently enrolled in Medicare. 63% of Charles County women aged 67-69 years enrolled in Medicare received a mammography screening in 2014. The county percentage is similar to the Maryland state percentage of 64%. The Charles County rate of mammography screening has seen steady increases each year for the last decade.



The County Health Rankings also included the percentage of diabetic Medicare enrollees aged 65-75 years that receive HbA1C monitoring. Regular HbA1c monitoring among diabetic patients is considered the standard of care. It helps assess the management of diabetes over the long term by providing an estimate of how well a patient has managed his or her diabetes over the past two to three months. When hyperglycemia is addressed and controlled, complications from diabetes can be delayed or prevented. 84% of Charles County diabetic Medicare recipients are receiving HbA1C monitoring in 2014. This is similar to the Maryland state percentage of 85%. The Charles County rate of HbA1c monitoring has seen steady increases in the past decade.



Transportation:

VanGo public transit provides transportation opportunities within Charles County and serves several desired primary destinations including the College of Southern Maryland, St. Charles Towne Center Mall, University of Maryland Charles Regional Medical, the Charles County Department of Health, employment locations and medical facilities, as well as numerous shopping centers. VanGo was named best fixed route system in the state of Maryland by the Transportation Association of Maryland (TAM).

Most routes operate Monday through Saturday from 7:00am-10:00pm on hourly schedules. Some secondary routes operate Monday through Friday with fewer loops throughout the day.

VanGo has stops at the Charles County Health Department, Charles County Department of Social Services, University of Maryland Charles Regional Medical Center, Western County Community Health Center, Health Partners Inc., College of Southern Maryland, and the Pembroke Medical Center.

VanGo comes to Charles Regional Medical Center at the 12th of every hour from 7:12 AM to 9:12 PM. VanGo comes to the Charles County Department of Health every 30 minutes from 7:07 AM to 5:07 PM. Additional buses to La Plata and Waldorf come every 30 minutes from 6:07 until 9:40 PM. VanGo comes

to the College of Southern Maryland every 30 minutes from 6:17 AM to 9:17 PM. Additional buses to La Plata and Waldorf come every 30 minutes from 6:17-9:17 PM.

A general all day ticket is \$2, or \$ 1 for a one-way ticket. Fees are half-price for seniors and Medicare card holders, and children under 6 are free.

Specialized Services

VanGO operates specialized transportation services for senior citizens and individuals with disabilities who are unable to access the general public services, and for medical assistance recipients who have no other means of transportation.

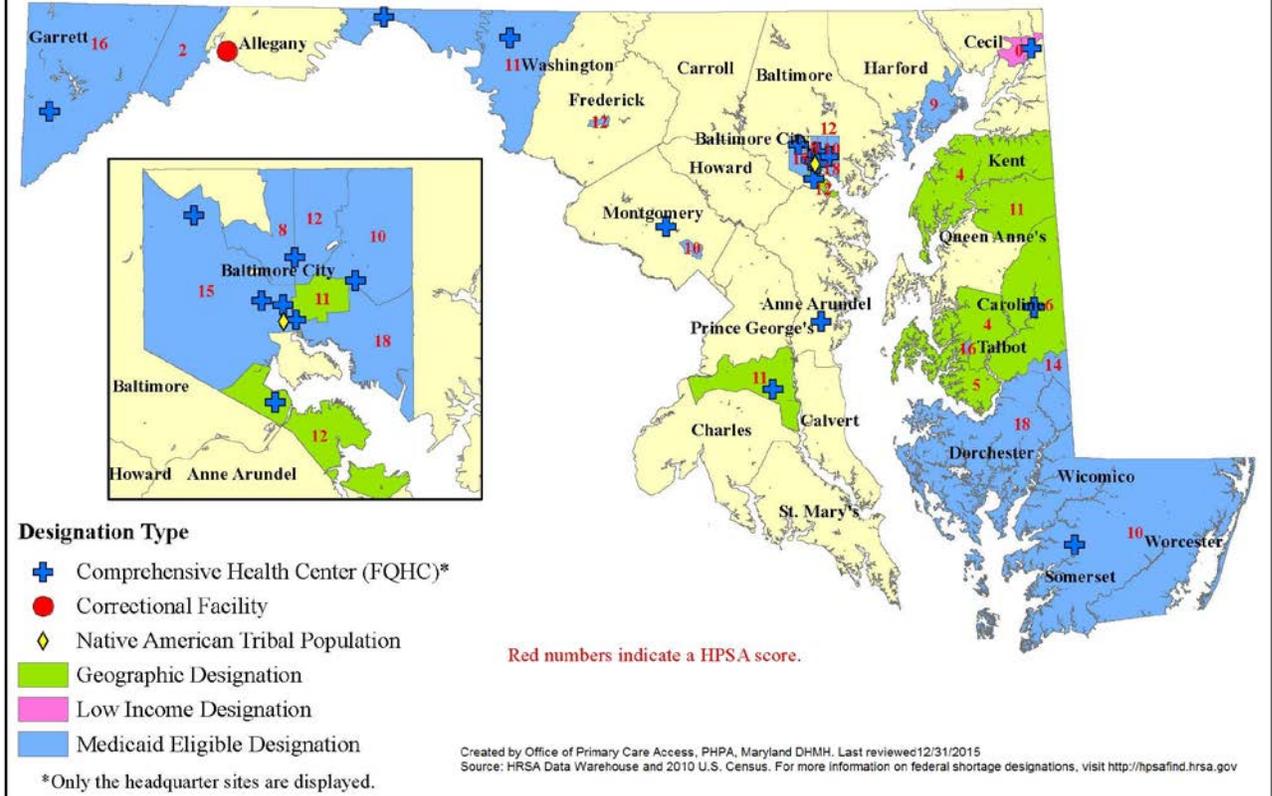
- [Specialized Services General and Fare Information](#)
- [Americans with Disabilities Act \(ADA\) Transportation](#)
- [Demand Response](#)
- [Subscription Services](#)

Health Professional Shortage Areas/ Medically Underserved Populations and Areas:

Health Professional Shortage Areas (HPSA):

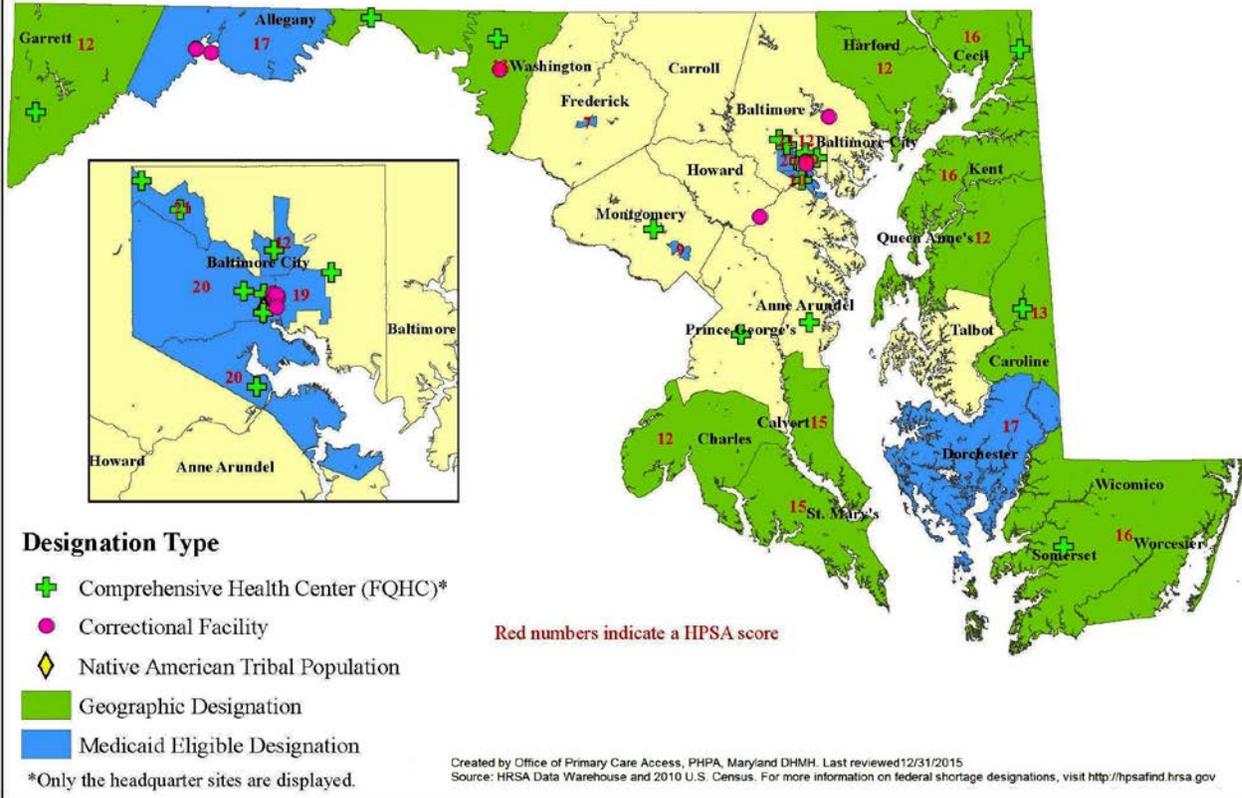
There is no federally designated health professional shortage area in Charles County for dental health. This designation is assigned by the United States Department of Health and Human Services' Health Resources and Services Administration (HRSA).

Maryland Health Professional Shortage Area (HPSA) Designations for Dental Care as of 12/31/2015



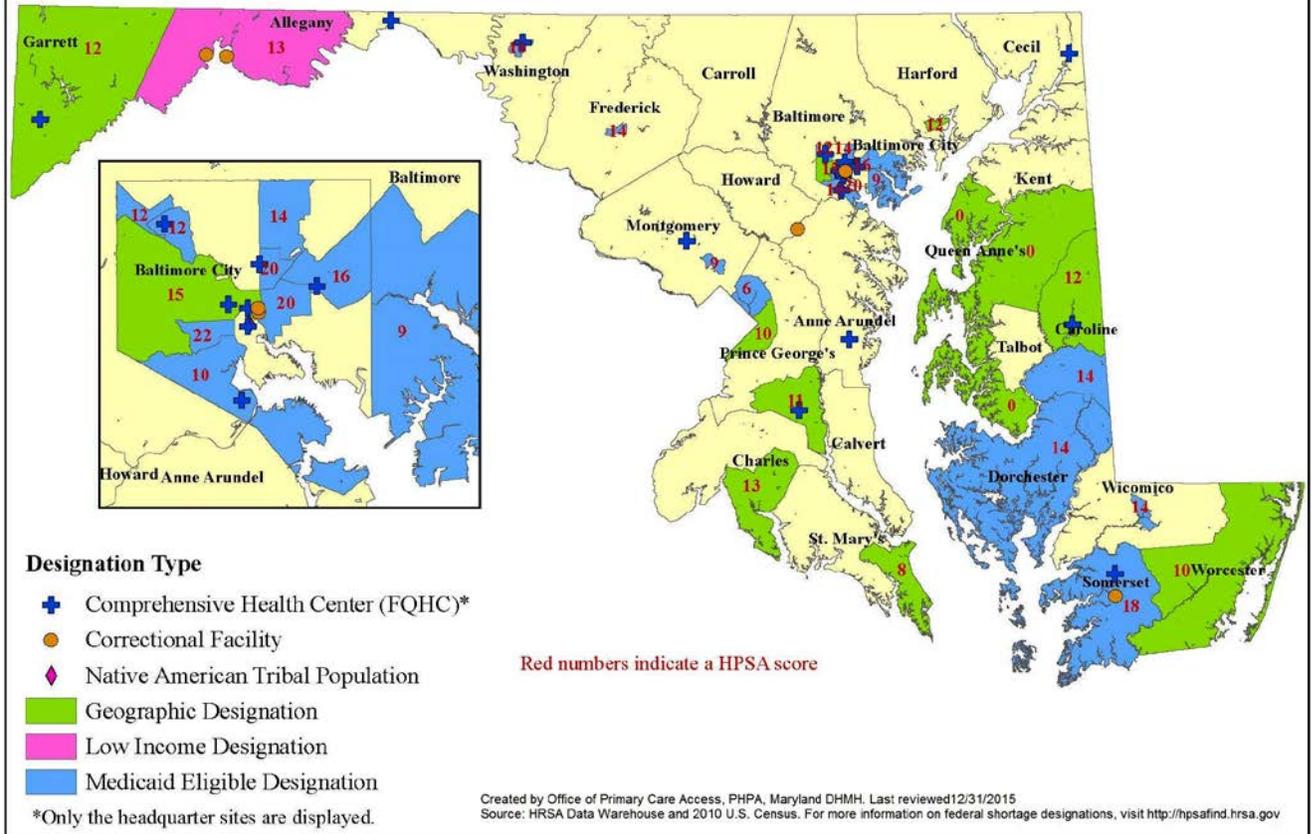
There is a federally designated mental health professional shortage area for the entire county. This was last updated on October 28, 2017. It is reported that there are 3 full-time equivalent non-federal mental health professionals practicing in Charles County. Charles County received a score of 9 out of 25. HPSA Scores are developed for use by the National Health Service Corps in determining priorities for assignment of clinicians. Scores range from 1 to 25 for primary care and mental health, 1 to 26 for dental. The higher the score is, the greater the priority.

Maryland Health Professional Shortage Area (HPSA) Designations for Mental Health as of 12/31/2015



There is a federally designated primary care professional shortage area for Southern Charles County. This was last updated on October 28, 2017. They report that there is one full-time equivalent primary care professional providing ambulatory patient care in the designated area. The Southern Charles County census tracts of 8511, 8512, 8513.01, and 8513.02 are included in the designated HPSA area. Charles County received a score of 13 out of 25. HPSA Scores are developed for use by the National Health Service Corps in determining priorities for assignment of clinicians. Scores range from 1 to 25 for primary care and mental health, 1 to 26 for dental. The higher the score is, the greater the priority.

Maryland Health Professional Shortage Area (HPSA) Designations for Primary Care as of 12/31/2015



Medically Underserved Populations and Areas:

Medically Underserved Areas/Populations (MUA/MUP) are areas or populations designated by HRSA as having: too few primary care providers, high infant mortality, high poverty and/or high elderly population.

There are 6 population/areas in Charles County with MUA/MUP designation.

There is one medically underserved population (MUP) in Charles County. An MUP is a group of people who face economic, cultural, or linguistic barriers to health care. In Charles County, the MUP is located in the Brandywine Service Area. This population is a government MUP, which means it was designated at the request of a State Governor based to documented unusual local conditions and barriers to accessing personal health services.

The Index of Medical Underservice (IMU) score. The lowest score (highest need) is 0; and the highest score (lowest need) is 100. The Brandywine MUP received a 0 IMU score. That means the need for medical services in this region is of the highest priority.

In addition to the MUP, there are 5 medically underserved areas (MUA) in Charles County. Medically Underserved Areas may be a whole county or a group of contiguous counties, groups of county or civil divisions or a group of urban census tracts in which residents have a shortage of personal health services. Those areas include:

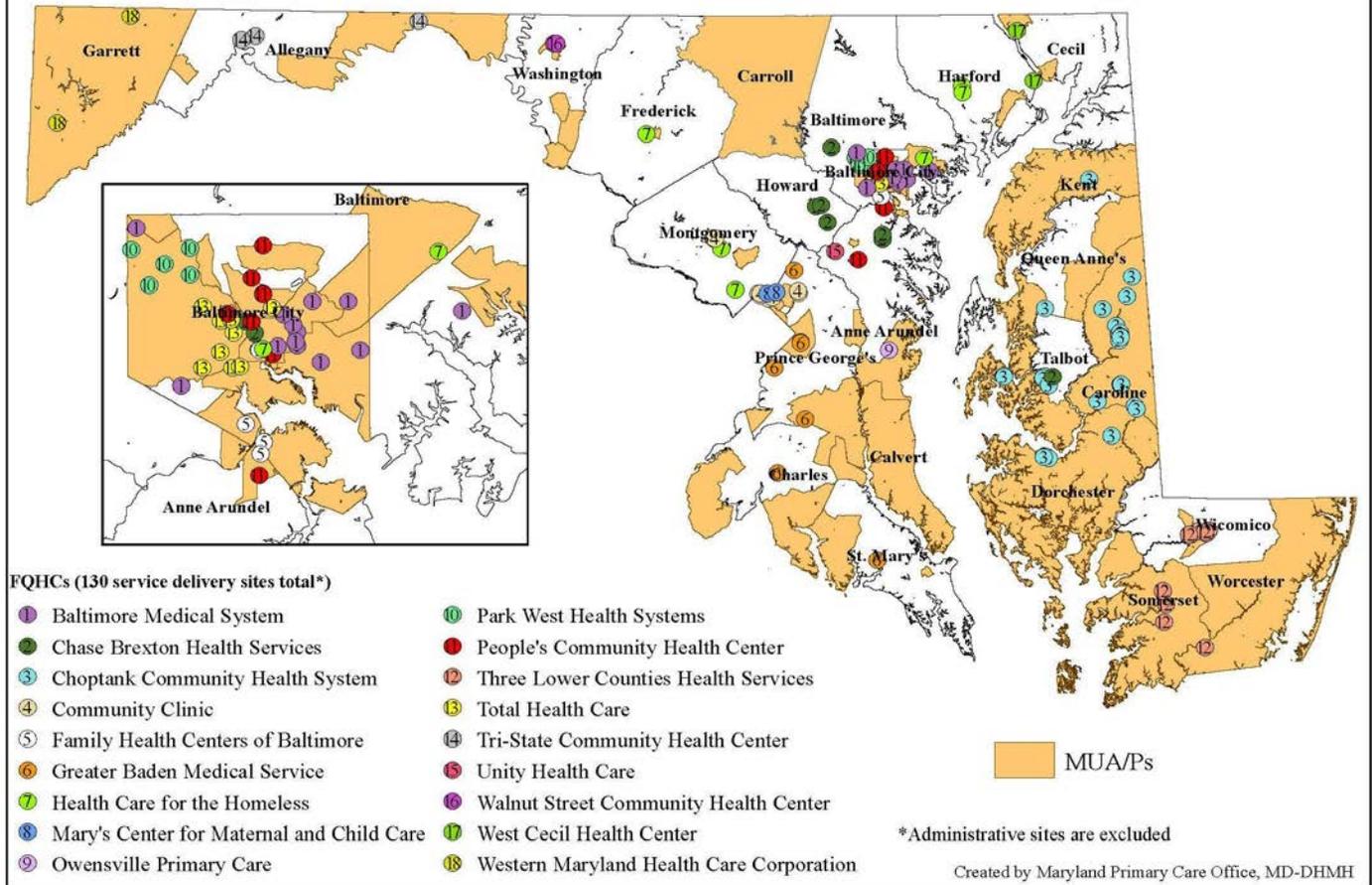
- **Medically Underserved Area (MUA):** Score 51.97
- District 4, Allens Fresh
- District 5, Thompkinsville
- District 9, Hughesville
- **Medically Underserved Area:** Score 61.25
- District 10, Marbury
- District 3, Nanjemoy

The IMU scale for Medically Underserved Areas is from 0 to 100, where 0 represents completely underserved and 100 represents best served or least underserved. Under the established criteria, each service area found to have an IMU of 62.0 or less qualifies for designation as an MUA.

The IMU involves four variables - ratio of primary medical care physicians per 1,000 population, infant mortality rate, percentage of the population with incomes below the poverty level, and percentage of the population age 65 or over. The value of each of these variables for the service area is converted to a weighted value, according to established criteria. The four values are summed to obtain the area's IMU score.

The Allens Fresh/Thompkinsville/Hughesville areas received an IMU score of 51.97. The Marbury/Nanjemoy areas received an IMU score of 61.25, which is close to the 62 cut off for MUA designation.

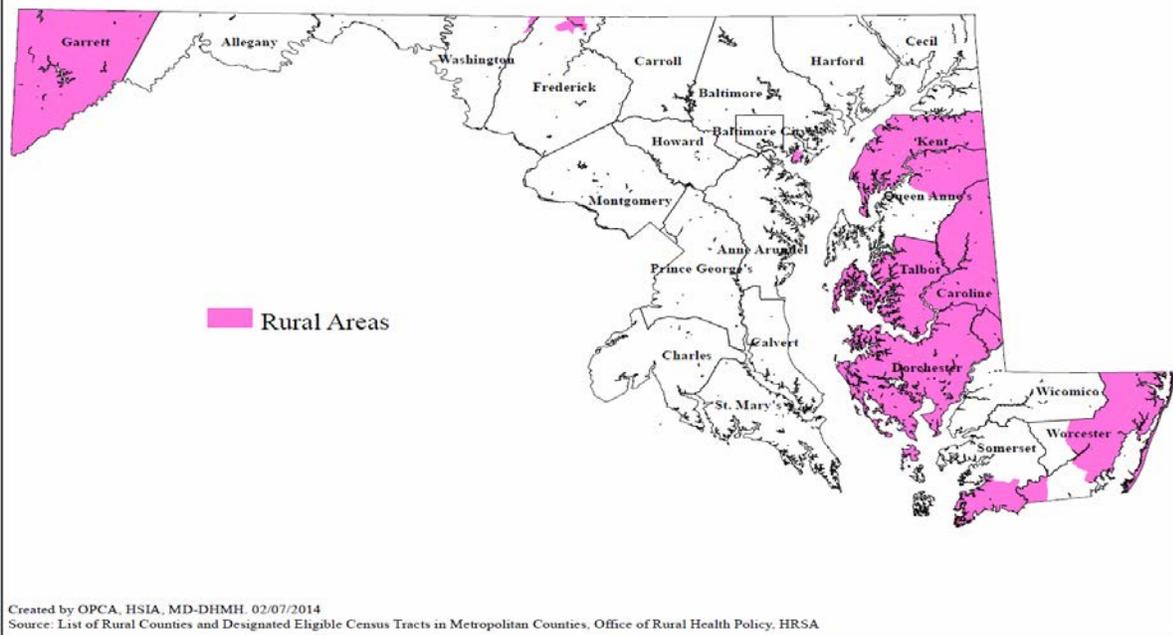
Maryland Medically Underserved Area/Population Designation (MUA/Ps) and Federally Qualified Health Centers (FQHCs) as of 12/31/2015



Rural Health Designation:

Charles County no longer holds a federal designation as a rural area. All Southern Maryland counties have lost their rural designation.

Federally Designated Rural Areas in Maryland



Availability of Health Services:

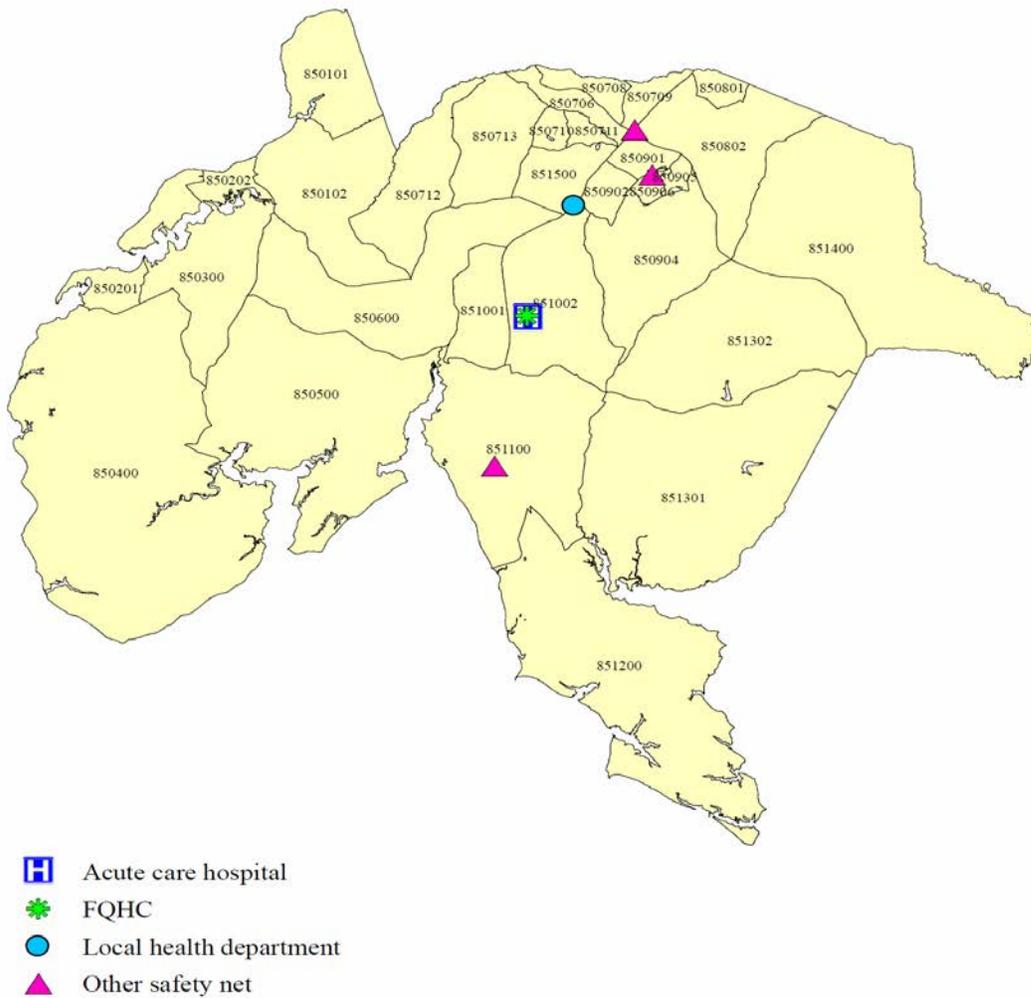
Maryland Health Assessment Tool 2013: Charles County Profile:

In 2013, the Maryland Office of Primary Care Access surveyed health safety net providers in each of the 24 Maryland jurisdictions in order to determine capacity and infrastructure for health service delivery. The following tables represent the Charles County profile of participating organizations. Not all health organizations in the county were asked to complete the survey, so the information below does not reflect all available services within the county.

1. Safety Net Organizations and Sites

Organization Name	Number of Sites
Charles County Department of Health	1
Greater Baden Medical Services, Inc.	1
Health Partners, Inc	1
Jude House Inc.	1
Walden Sierra Inc.	1

Charles County - Safety Net Providers



Created by Office of Primary Care Access, HSIA, Maryland DHMH 06/27/2013

2. Hours of Operation

Hours of Operation	Number of Sites
Open weekdays and weekends	1
Open weekdays only	4
Open weekends only	0

3. Type of Facility

Type of Facility	Number of Sites
Federally Qualified Health Center (FQHC) or Look-alike	1
Native Hawaiian health center	0
Tribal/urban Indian health center	0
Tuberculosis clinic	1
Sexually transmitted disease clinic	1
Ryan White HIV/AIDs program grantees	1
Comprehensive Hemophilia diagnostic treatment center	0
Independent medical group	0
Hospital-based clinic	0
Local health department	1
Academic practice	0
School based health center	0
Free or charitable clinic	1
Migrant health center	0
Health care program for the homeless	0
Mobile clinic	0
Other	
Mental health and substance abuse clinic	2
Long term resident facility for substance abuse disorder	1

4. County Population¹

Civilian non-institutionalized population	144,415
With health insurance coverage	132,275
With private health insurance	117,702
With public coverage	28,921
No health insurance coverage	12,140

5. Safety Net Patients

Total patients treated in safety net facilities	24,541
Total uninsured patients including PAC	5,525
Total Medicaid/SCHIP patients	4,044
Total Medicare patients	301
Total private insurance patients	543

6. Chronic Disease Burden of Uninsured Patients Treated in Safety Net Facilities

Total uninsured patients with diabetes	103
--	-----

¹ American Community Survey, 2009-2011

Total uninsured patients with cardiovascular disease	26
Total uninsured patients with hypertension	206
Total uninsured patients with asthma/COPD	38
Total uninsured patients with behavioral health/substance abuse	1,371

7. Safety Net Providers

Primary Care Providers	Number	FTE
Family Medicine	0	0
General Practice	0	0
Internal Medicine	3	0.05
Pediatrics	1	1.00
Obstetrics/gynecology	1	0.03
Physician assistants	0	0.09
Nurse practitioners	4	2.48
Dental Care Providers	Number	FTE
Dentists	5	3.03
Dental hygienists/assistants	6	n/a
Mental Health Providers	Number	FTE
Psychiatrists	5	1.80
Behavioral/mental health providers	40	34.90

8. Population to Provider Ratio

Type of Provider	Safety Net Patients to Safety Net Provider Ratio
Primary Care	6,724:1
Dental Care	8,099:1
Mental Health	669:1
Type of Provider	Current Uninsured Population ¹ to Safety Net Provider Ratio
Primary Care	3,326:1
Dental Care	4,007:1
Mental Health	331:1

9. Essential Health Benefits

Facilities providing the following Essential Health Benefits:	Number of Sites
Ambulatory patient services	2
Adult dental care	2
Adult vision care	0
Maternity and newborn care	0
Mental health and substance use disorder services, including behavioral health treatment	4

Prescription drugs	2
Rehabilitative and habilitative services and devices	2
Laboratory services	1
Preventive and wellness services and chronic disease management	4
Pediatric primary care	0
Pediatric dental care	2
Pediatric vision care	0
All services	0

10. Essential Health Benefits Reimbursement

Essential Health Benefits	Number of Sites Get Reimbursement				
	Medicaid FFS	Medicaid MCO	PAC	Private Insurance	Self Pay
Ambulatory patient services	2	2	2	2	2
Adult dental care	1	1	1	1	1
Adult vision care	0	0	0	0	0
Maternity and newborn care	0	0	0	0	0
Mental health and substance use disorder services, including behavioral health treatment	3	3	3	2	4
Prescription drugs	1	1	1	1	1
Rehabilitative and habilitative services and devices	0	0	0	0	0
Laboratory services	0	0	0	0	1
Preventive and wellness services and chronic disease management	2	1	2	2	2
Pediatric primary care	0	0	0	0	0
Pediatric dental care	1	1	1	1	1
Pediatric vision care	0	0	0	0	0

11. Contracts with Health Plans

Private insurance	Number of Sites
Aetna	2
Avalon Insurance Co.	0
Carefirst	3
Kaiser	0
Time Insurance Co.	0
United Health Care	3
Coventry	1
Cigna	1
Medicaid	
Amerigroup	3
MedStar Family Choice	1

Priority Partners	3
United Health Care (MCO)	3
Diamond Plan	1
Jai Medical Systems	0
Maryland Physicians Care	3
Standalone dental	
Aetna Dental	1
Atlantic Southern Dental	0
Ameritas	0
Delta Denta	0
Denta Quest	1
Metropolitan Life	0
United Concordia	1
Standalone vision	
Ameritas	0
Avesis	0
Superior	0
VSP	0

12. Maryland Uniform Credentialing Program

Number of facilities with credentialing program	1
---	---

13. Technical Assistance

Technical assistance needed	Number of sites
Strategic planning	2
Contracting assistance	2
Credentialing assistance	3
Marketing planning	3
Billing management assistance	3

Maryland Health Workforce Study Phase 2 Report, January 2014:

In January 2014, the Maryland Health Care Commission (MHCC) released a second report detailing Phase 2 of the Maryland Health Workforce Study. This study assessed health workforce distribution and the adequacy of supply. Using funding from the Robert Wood Johnson Foundation, the MHCC was able to study the Maryland healthcare workforce on the state and jurisdictional level. Phase II presents estimates of current supply and demand for health professions designated by MHCC has high priority in supporting Maryland's transition to health reform, and for which data were readily available for estimating supply and demand. These professions included primary care specialties and psychiatrists.

Current supply estimates were also presented for psychologists, social workers, counselors, physician assistants, pharmacists, registered nurses, and dentists.

Demand modeling: Estimates of the current demand for healthcare providers were developed using the IHS Healthcare Demand Micro-simulation Model. The major components of this model include: 1. A population database that contains characteristics and health risk factors for a representative sample of the population in each Maryland count; 2. Equations that relate a person's characteristics to his or her demand for healthcare services by care delivery setting; and 3. Staffing patterns that convert demand for healthcare services to demand for full time equivalent (FTE) providers.

In Charles County, the primary care FTE demand is greater than the primary care FTE supply (7.4 vs. 6.1). There is an 18% shortfall in the demand for primary care services. Charles County falls in the up to 20% shortage area for primary care physician supply.

Map 1: Maryland County-Level Adequacy of FTE Primary Care Physician Supply

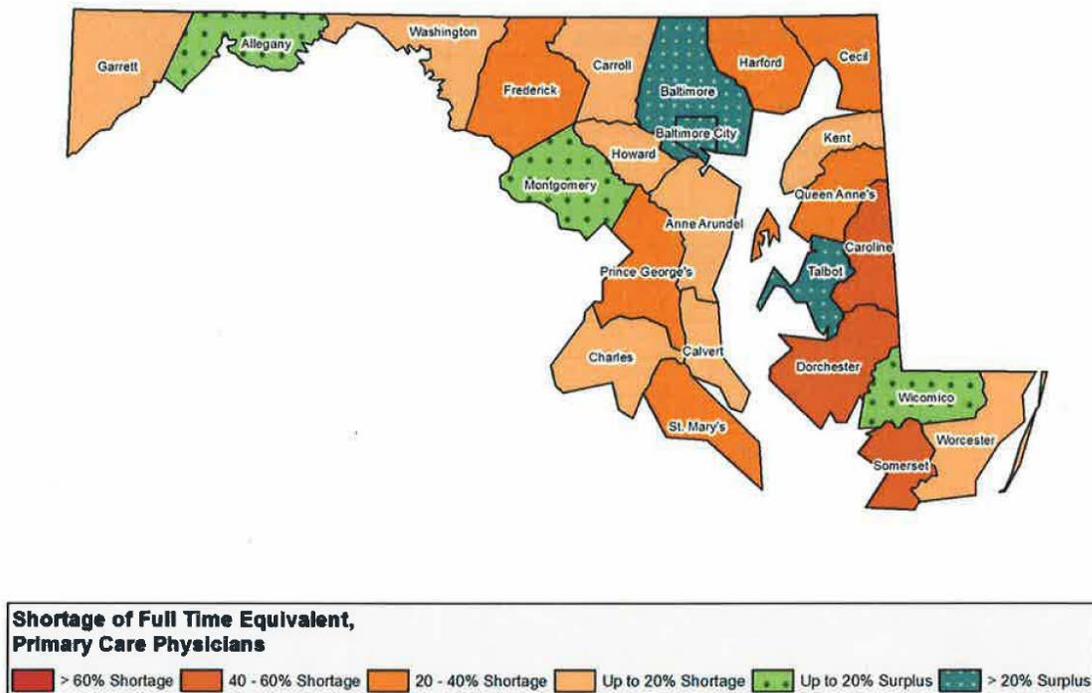


Exhibit 3: Adequacy of Supply for Primary Care Physicians by County, 2012

County	Total FTEs			FTEs/10,000 Population	
	FTE Demand	FTE Supply	Supply - Demand	FTE Demand	FTE Supply
Allegany	57	63	6	7.6	8.5
Anne Arundel	407	379	(28)	7.4	6.9
Baltimore City	464	817	353	7.5	13.1
Baltimore County	621	788	167	7.6	9.6
Calvert	66	56	(10)	7.5	6.2
Caroline	25	14	(11)	7.5	4.2
Carroll	125	103	(22)	7.5	6.2
Cecil	75	60	(15)	7.5	5.9
Charles	111	91	(20)	7.4	6.1
Dorchester	25	14	(11)	7.9	4.1
Frederick	176	140	(36)	7.4	5.8
Garrett	23	20	(3)	7.7	6.6
Harford	186	142	(44)	7.5	5.7
Howard	218	197	(21)	7.3	6.6
Kent	16	16	0	8.0	7.9
Montgomery	729	833	104	7.2	8.3
Prince George's	637	471	(166)	7.2	5.3
Queen Anne's	37	25	(12)	7.6	5.1
St. Mary's	80	53	(27)	7.3	4.9
Somerset	19	8	(11)	7.3	2.9
Talbot	31	42	11	8.1	11.0
Washington	112	111	(1)	7.5	7.4
Wicomico	75	81	6	7.5	8.0
Worcester	42	41	(1)	8.0	7.9
Total	4,357	4,565	208	7.4	7.8

Note: Primary care specialties include general and family practice, general internal medicine, geriatrics, and general pediatrics.

The supply versus demand for pediatric services in Charles County is similar.

Exhibit 4: Adequacy of Supply for Pediatricians by County, 2012

County	Total FTEs			FTEs/10,000 Children	
	FTE Demand	FTE Supply	Supply - Demand	FTE Demand	FTE Supply
Allegany	10	11	1	7.0	7.9
Anne Arundel	87	85	(2)	7.1	6.9
Baltimore County	125	185	60	7.1	10.4
Baltimore City	99	168	69	7.3	12.3
Calvert	15	13	(2)	7.0	6.1
Caroline	6	1	(5)	7.0	0.9
Carroll	26	21	(5)	6.9	5.4
Cecil	16	9	(7)	7.0	3.9
Charles	26	26	0	7.1	7.0
Dorchester	5	1	(4)	7.1	1.9
Frederick	40	34	(6)	7.0	5.9
Garrett	4	-	(4)	6.9	-
Harford	40	40	0	7.0	7.0
Howard	51	52	1	7.1	7.2
Kent	2	1	(1)	7.0	2.6
Montgomery	163	234	71	7.1	10.1
Prince George's	148	104	(44)	7.2	5.1
Queen Anne's	7	6	(1)	6.9	5.7
St. Mary's	19	12	(7)	7.0	4.3
Somerset	3	2	(1)	7.1	3.6
Talbot	5	9	4	7.0	13.4
Washington	23	21	(2)	7.0	6.5
Wicomico	16	26	10	7.1	11.1
Worcester	7	-	(7)	7.0	-
Total	943	1,061	118	7.1	8.0

The FTE per 10,000 supply rates for professional counselors, social workers, and psychologists in Charles County is much lower than the rates for Maryland. The Charles County FTE rate for physician assistants is the only rate that came close to the Maryland state supply rate.

Exhibit 6: Supply of Selected Health Professions by County, 2012

County	Professional Counselors		Social Workers		Psychologists		Physician Assistants	
	FTEs	FTE/10,000	FTEs	FTE/10,000	FTEs	FTE/10,000	FTEs	FTE/10,000
Allegany	267	36.1	222	29.9	27	3.6	27	3.6
Anne Arundel	684	12.4	833	15.1	144	2.6	162	2.9
Baltimore City	2,132	34.3	4,030	64.9	405	6.5	570	9.2
Baltimore County	1,294	15.8	2,124	26.0	357	4.4	330	4.0
Calvert	118	13.2	128	14.2	8	0.8	20	2.2
Caroline	17	5.2	61	18.6	-	-	1	0.3
Carroll	277	16.5	315	18.8	48	2.9	52	3.1
Cecil	97	9.5	175	17.2	25	2.4	23	2.3
Charles	193	12.8	126	8.4	14	0.9	49	3.2
Dorchester	79	24.3	150	45.9	5	1.4	3	0.8
Frederick	320	13.3	530	22.1	56	2.3	62	2.6
Garrett	53	17.6	73	24.3	1	0.2	5	1.5
Harford	351	14.1	355	14.3	46	1.9	63	2.5
Howard	407	13.6	667	22.3	181	6.0	40	1.3
Kent	41	20.1	52	25.5	8	3.7	3	1.5
Montgomery	1,200	11.9	2,927	29.1	754	7.5	300	3.0
Prince George's	833	9.4	913	10.4	129	1.5	154	1.7
Queen Anne's	29	5.9	70	14.4	9	1.7	3	0.5
St. Mary's	105	40.0	115	43.8	18	1.6	22	8.4
Somerset	45	4.1	79	7.2	-	-	4	0.3
Talbot	62	16.3	167	43.8	7	1.8	11	2.8
Washington	273	18.3	435	29.1	18	1.2	65	4.4
Wicomico	193	19.1	334	33.2	20	1.9	72	7.1
Worcester	67	12.9	106	20.6	5	0.9	11	2.1
Total	9,131	15.5	14,982	25.5	2,278	3.9	2,045	3.5

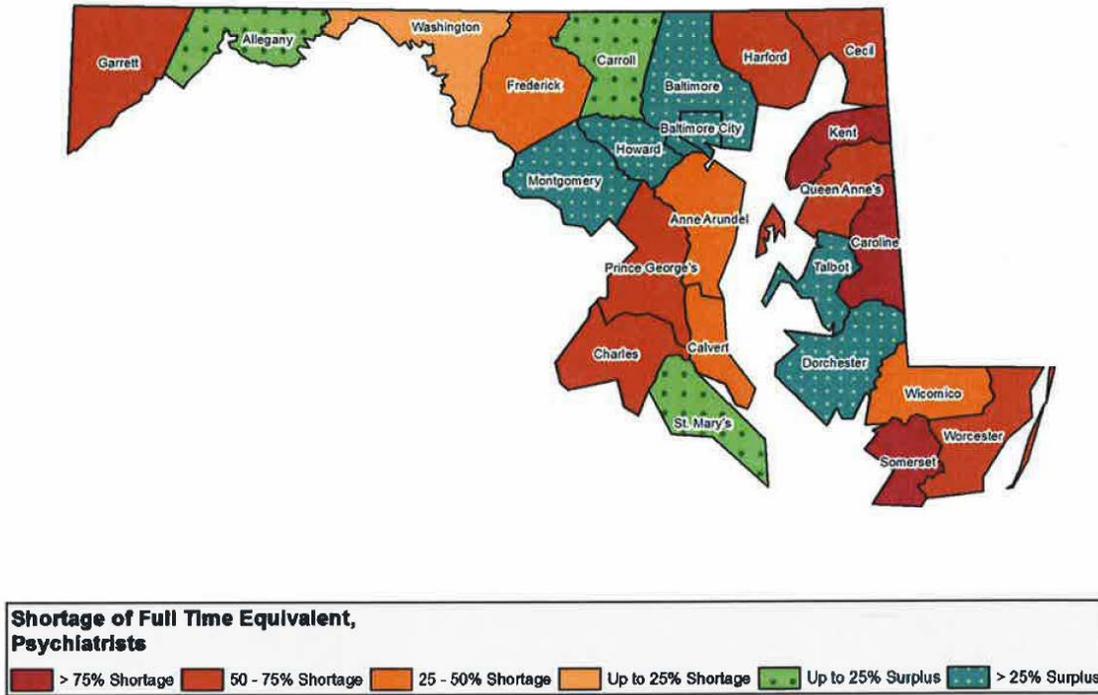
Note: These are professions for which only FTE supply analysis was possible at this time.

The demand for psychiatrists in Charles County is much higher than the county supply for psychiatry. Charles County has a shortage between 50-75% of full time equivalent psychiatrists.

Exhibit 5: Adequacy of Supply for Psychiatrists by County, 2012

County	Total FTEs			FTEs/10,000 Population	
	FTE Demand	FTE Supply	Supply - Demand	FTE Demand	FTE Supply
Allegany	10	10	0	1.3	1.4
Anne Arundel	74	41	(33)	1.3	0.7
Baltimore City	94	233	139	1.5	3.7
Baltimore County	113	242	129	1.4	3.0
Calvert	12	6	(6)	1.3	0.7
Caroline	4	-	(4)	1.3	-
Carroll	22	26	4	1.3	1.6
Cecil	13	6	(7)	1.3	0.6
Charles	22	6	(16)	1.5	0.4
Dorchester	5	8	3	1.4	2.5
Frederick	32	18	(14)	1.3	0.8
Garrett	4	2	(2)	1.3	0.5
Harford	33	15	(18)	1.3	0.6
Howard	40	64	24	1.3	2.1
Kent	3	-	(3)	1.4	-
Montgomery	134	214	80	1.3	2.1
Prince George's	135	47	(88)	1.5	0.5
Queen Anne's	6	3	(3)	1.3	0.6
St. Mary's	14	5	(9)	1.3	0.4
Somerset	4	1	(3)	1.5	0.3
Talbot	5	8	3	1.3	2.2
Washington	20	18	(2)	1.3	1.2
Wicomico	14	8	(6)	1.4	0.8
Worcester	7	2	(5)	1.3	0.5
Total	820	983	163	1.4	1.7

Map 2: Maryland county-Level Adequacy of FTE Psychiatrist Supply



2016 Maryland Physician Workforce Profile:

The current state of the physician workforce in Maryland is present below in the following three charts. The data is based on the American Medical Association’s Masterfile and is compiled each year into the State Physician Workforce Data Report. The results for Maryland from the 2017 State Physician Workforce Data Report 22731 active physicians and 6955 primary care physicians practicing in Maryland.

Maryland Physician Workforce Profile

2	State Population:	6,016,447	Total Female Physicians:	9,013
0	Population ≤ age 21	1,655,330	Total MD or DO Students:	1,950
1	Total Active Physicians:	22,731	Total Residents:	2,814
6	Primary Care Physicians:	6,955		

For additional data, including maps and tables, please see the 2017 State Physician Workforce Data Report online at www.aamc.org/2017statedatareport

		MD	MD Rank	State Median
Physician Supply	Active Physicians per 100,000 Population, 2016	377.8	2	257.6
	Total Active Patient Care Physicians per 100,000 Population, 2016	296.7	6	227.2
	Active Primary Care Physicians per 100,000 Population, 2016	115.6	6	90.8
	Active Patient Care Primary Care Physicians per 100,000 Population, 2016	95.7	10	82.5
	Active General Surgeons per 100,000 Population, 2016	9.7	12	7.7
	Active Patient Care General Surgeons per 100,000 Population, 2016	7.7	12	6.9
	Percentage of Active Physicians Who Are Female, 2016	39.7%	4	33.8%
	Percentage of Active Physicians Who Are International Medical Graduates (IMGs), 2016	26.8%	9	19.1%
	Percentage of Active Physicians Who Are Age 60 or Older, 2016	32.8%	12	30.3%
Undergraduate Medical Education (UME)	MD and DO Student Enrollment per 100,000 Population, AY 2016-2017	32.4	24	32.7
	Student Enrollment at Public MD and DO Schools per 100,000 Population, AY 2016-2017	22.6	17	21.2
	Percentage Change in Student Enrollment at MD and DO Schools, 2006-2016	3.2%	44	24.6%
	Percentage of MD Students Matriculating In-State, AY 2016-2017	27.1%	43	65.6%
Graduate Medical Education (GME)	Total Residents/Fellows in ACGME Programs per 100,000 Population as of December 31, 2016	46.8	11	28.1
	Total Residents/Fellows in Primary Care ACGME Programs per 100,000 Population as of Dec. 31, 2016	15.6	11	10.6
	Percentage of Residents in ACGME Programs Who Are IMGs as of December 31, 2016	23.6%	18	20.5%
	Ratio of Residents and Fellows (GME) to Medical Students (UME), AY 2015-2016	1.4	10	1.0
	Percent Change in Residents and Fellows in ACGME-Accredited Programs, 2006-2016	0.4%	48	17.6%
Retention	Percentage of Physicians Retained in State from Undergraduate Medical Education (UME), 2016	22.2%	38	38.5%
	Percentage of Physicians Retained in State from Public UME, 2016	24.9%	40	44.1%
	Percentage of Physicians Retained in State from Graduate Medical Education (GME), 2016	38.0%	42	44.9%
	Percentage of Physicians Retained in State from UME and GME Combined, 2016	53.0%	41	69.0%

State Rank: How the state ranks compared to the other 49. Rank of 1 goes to the state with the highest value for the category.

State Median: The value in the middle of the 50 states, with 25 states above the median and 25 states below (excludes the District of Columbia and Puerto Rico).

Source: 2017 State Physician Workforce Data Report

The specialties with the highest people to physician ratios were interventional cardiology and neuroradiology. Females make up 39.7% of all specialists. Additionally, 32.8% of specialists in Maryland are 60 years of age and older.

Maryland Physician Workforce Profile

Specialty	Total Active		Female		Age 60 or Older	
	Physicians	People Per Physician	Number	Percent	Number	Percent
All Specialties	22,731	265	9,013	39.7	7,436	32.8
Allergy & Immunology	205	29,349	82	40.0	94	45.9
Anatomic/Clinical Pathology	391	15,387	158	40.4	194	49.6
Anesthesiology	1,004	5,992	332	33.1	309	30.8
Cardiovascular Disease	558	10,782	90	16.2	273	48.9
Child & Adolescent Psychiatry**	307	5,392	188	60.6	94	30.6
Critical Care Medicine	353	17,044	105	29.8	39	11.0
Dermatology	291	20,675	149	51.2	99	34.0
Emergency Medicine	871	6,908	298	34.3	190	21.8
Endocrinology, Diabetes & Metabolism	271	22,201	150	55.4	81	29.9
Family Medicine/General Practice	1,591	3,782	824	51.9	499	31.4
Gastroenterology	371	16,217	87	23.5	142	38.4
General Surgery	582	10,338	126	21.6	210	36.1
Geriatric Medicine***	165	5,310	79	47.9	48	29.1
Hematology & Oncology	512	11,751	186	36.3	165	32.2
Infectious Disease	457	13,165	184	40.3	141	30.9
Internal Medicine	3,495	1,721	1,391	39.9	1,192	34.1
Internal Medicine/Pediatrics	104	57,850	70	67.3	*	*
Interventional Cardiology	54	111,416	*	*	*	*
Neonatal-Perinatal Medicine	119	50,558	82	68.9	41	34.5
Nephrology	259	23,230	92	35.5	66	25.5
Neurological Surgery	119	50,558	*	*	40	33.6
Neurology	444	13,551	139	31.4	183	41.2
Neuroradiology	70	85,949	15	21.4	*	*
Obstetrics & Gynecology	1,081	5,566	667	61.7	345	31.9
Ophthalmology	545	11,039	171	31.4	193	35.4
Orthopedic Surgery	422	14,257	28	6.6	180	42.7
Otolaryngology	241	24,965	53	22.0	88	28.2
Pain Medicine & Pain Management	134	44,899	33	24.6	11	8.2
Pediatrics**	1,578	1,049	1,013	64.4	538	34.1
Physical Medicine & Rehabilitation	240	25,069	86	36.0	61	25.4
Plastic Surgery	176	34,184	34	19.3	67	38.1
Preventive Medicine	420	14,325	175	41.7	194	46.2
Psychiatry	1,138	5,287	488	41.2	540	47.5
Pulmonary Disease	135	44,566	16	11.9	94	69.6
Radiation Oncology	125	48,132	50	40.0	30	24.0
Radiology & Diagnostic Radiology	640	9,401	220	34.4	269	42.0
Rheumatology	201	29,933	102	50.7	62	30.8
Thoracic Surgery	100	60,164	*	*	36	36.0
Urology	228	26,388	23	10.1	81	35.5
Vascular & Interventional Radiology	77	78,136	10	13.0	*	*
Vascular Surgery	98	61,392	17	17.3	25	25.5

Sources: AMA Physician Masterfile (December 31, 2015). Population estimates as of July 1, 2016 are from the U.S. Census Bureau (Release date: December 2016)

* Counts for specialties with fewer than 10 physicians are not shown

** Only those 21 years or younger are included in People Per Physician

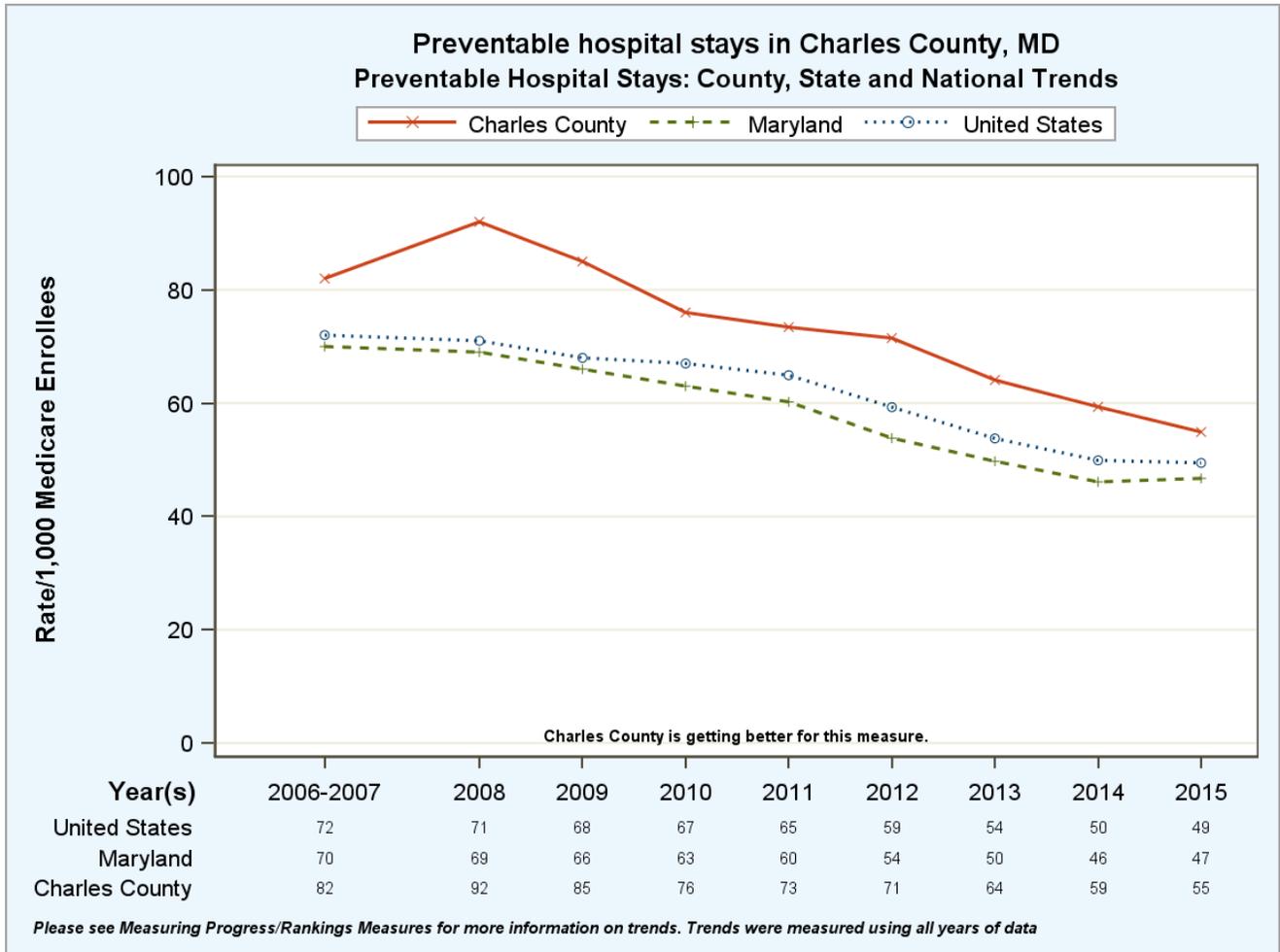
*** Only those 65 years or older are included in People Per Physician

Primary Care Physicians Ratio:

Access to care requires not only financial coverage, but also, access to providers. While high rates of specialist physicians have been shown to be associated with higher, and perhaps unnecessary utilization, sufficient availability of primary care physicians is essential for preventive and primary care, and when needed, referrals to appropriate specialty care. Using data from the Area Health Resource File and the American Medical Association, the County Health Rankings were able to provide 2012 primary care physician ratios for all United States counties. For 2015, the Charles County primary care physician ratio was 2480:1. Primary Care Physicians (PCP) is the ratio of the population to total primary care physicians. Primary care physicians include non-federal, practicing physicians (M.D.'s and D.O.'s) under age 75 specializing in general practice medicine, family medicine, internal medicine, and pediatrics. The 2015 Charles County PCP ratio is almost twice as high as the Maryland state ratio of 1140:1. The Charles County PCP ratio has gotten worse since the last needs assessment report when the ratio was 2035:1.

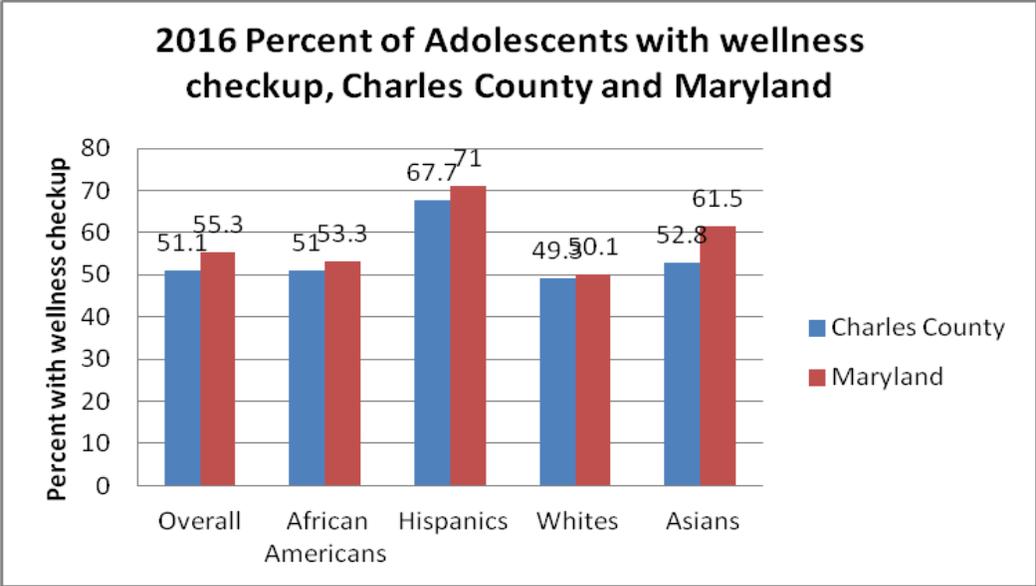
Preventive Hospital Stays:

The Robert Wood Johnson Foundation's County Health Rankings examine the number of hospital stays for ambulatory care sensitive conditions among county Medicare enrollees. The 2015 Charles County preventable hospital stay rate was 55 per 1000 Medicare enrollees and is higher than the Maryland state average rate of 47 per 1000 Medicare enrollees. Some decreases have been seen for Charles County since 2008; however, the Charles County rate has consistently been above the state and national rates. The 2015 Charles County preventable hospital stay rate is a decrease from the 2012 rate of 71 per 1000 Medicare enrollees reported in the last needs assessment.

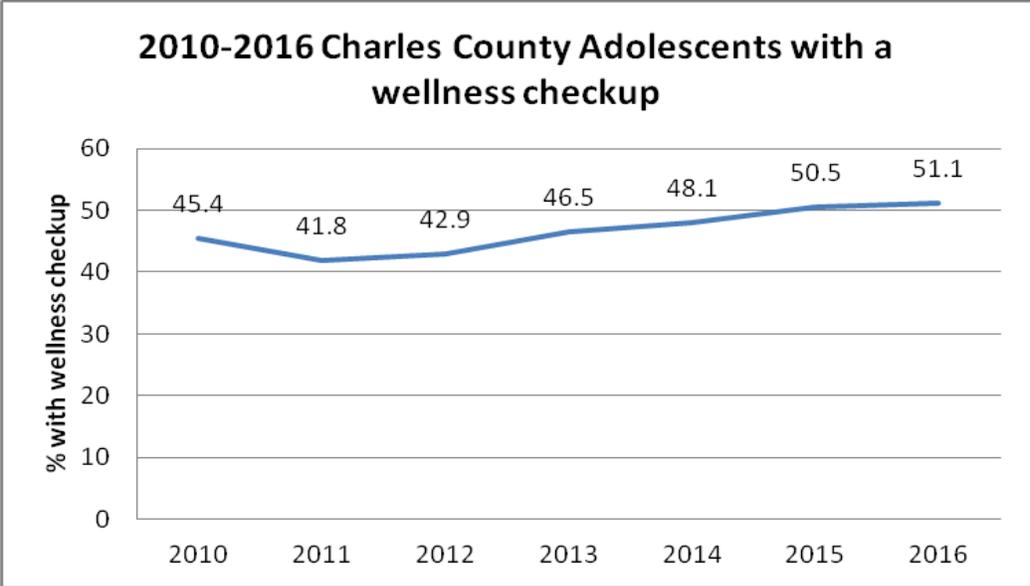


Adolescent Wellness Check-ups:

In 2016, 51.1% of Charles County adolescents aged 13-20 years enrolled in Medicaid had a wellness checkup. This is below the Maryland state average percentage of 55.3% of adolescents with a wellness check up. The percentage of wellness checkups is highest for Charles County Hispanics (67.7%) and lowest among Charles County Whites (49.3%). The same racial disparities are seen on a state level.



The percentage of Charles County adolescents receiving a wellness checkup has increased steadily each year since 2010 when the percentage was 45.4%.



Access to Care References:

1. 2015 Charles County and Maryland Access to Care, health insurance, and health status estimates. Maryland Behavioral Risk Factor Surveillance System. Maryland Department of Health. Available at: www.marylandbrfss.org.
2. 2015 Charles County Health Uninsurance Rates. US Census Bureau Small Area Health Insurance Estimates. Accessed through the Robert Wood Johnson Foundation’s County Health Rankings. Available at countyhealthrankings.org.

3. 2016 Charles County and Maryland Estimates of Uninsured among ED Visits. Health Services Cost Review Commission. Accessed through the Maryland State Health Improvement Process website. Available at: <http://charles.md.networkofcare.org/ph/ship.aspx#cat5>.
4. 2008-2017 Maryland Medicaid Enrollment and Eligibility Counts. Maryland Medicaid eHealth Statistics. Maryland Department of Health. Prepared by the Hilltop Institute. Available at: <https://md-medicaid.org/eligibility/new/index.cfm>.
5. 2014 Charles County Mammography Screening and Diabetic Monitoring Percentages. Robert Wood Johnson Foundation. County Health Rankings. Data extracted from the US Department of Health and Human Services: Center for Medicaid and Medicare Services. Available at: countyhealthrankings.org.
6. Charles County VanGo specifics and future plans. Charles County Government. Available at: <http://www.charlescountymd.gov/pgm/vango/vango-schedules>.
7. Primary Care, Mental Health and Dental Health Professional Shortage Area and Medically Underserved Areas/Populations Designations. United States Department of Health and Human Services' Health Resources and Services Administration. Available at: hpsafind.hrsa.gov and the Maryland Office of Primary Care Access. Maryland Department of Health.
8. Maryland Rural Health Designations. Office of Primary Care Access. Maryland Department of Health. Data extracted from the. US Health Resources and Services Administration: Office of Rural Health Policy. Available at: <https://pophealth.health.maryland.gov/Pages/Primary-Care.aspx>.
9. 2013 Charles County Profile. 2013 Maryland Health Assessment Tool. Office of Primary Care Access. Maryland Department of Health. Available at: <https://pophealth.health.maryland.gov/Pages/Primary-Care.aspx>.
10. 2013 Maryland Health Care Workforce Studies. Maryland Health Care Commission. 2013 Presentation and January 2014 Report. Available at mhcc.maryland.gov.
11. 2016 Maryland Physician Workforce Profile. 2017 State Physician Workforce Data Report. Association of American Medical Colleges. Available at: <https://www.aamc.org/data/workforce/reports/484392/2017-state-physician-workforce-data-report.html>.
12. 2015 Charles County Primary Care Physician Ratio. Robert Wood Johnson Foundation. County Health Rankings. Data extracted from the HRSA Area Health Resource File and American Medical Association. Available at countyhealthrankings.org.
13. 2015 Preventive Hospital Stay Rates. Robert Wood Johnson Foundation. County Health Rankings. Data extracted from the US Department of Health and Human Services: Center for Medicaid and Medicare Services. Available at: countyhealthrankings.org.

14. 2016 Charles County and Maryland estimates of adolescents enrolled in Medicaid with a wellness checkup. Maryland Medicaid data accessed through the Maryland State Health Improvement Process website. Available at: <http://charles.md.networkofcare.org/ph/ship.aspx#cat5>.

Qualitative Data Relating to Access to Care:

Long Survey Responses:

67% of long survey participants reported that access to healthcare is a health problem in Charles County on some level. 26% felt that access to health care is a “serious problem” in the county.

70% of the long survey participants reported that affordable health care is a health problem in Charles County on some level. 40% felt that access to affordable health care is a "serious problem" in Charles County.

81% of the long survey participants reported that health insurance is a health problem in Charles County on some level. 33% felt that health insurance is a "serious problem" in Charles County.

Long survey participants were also asked if they have seen improvements in Charles County in terms of health. Over half of the respondents to this question (58.01%) have seen improvements to increase access to health care within the county. 16.01% reported improvements in access to needed medications.

Most of the survey participants reported having a routine doctor’s visit in the last 12 months (84.76%). Only 1% reported that they have never had a routine doctor’s visit.

Time since last doctor’s visit	Response Count	Response Percent
Within the last 6 months	519	64.31%
Within 6-12 months	165	20.45%
Within 13-18 months	46	5.70%
Within 19-24 months	25	3.10%
Within 2-5 years	35	4.34%
Greater than 5 years	9	1.12%
Never had a routine doctor visit	8	0.99%

Most of the survey participants received their routine health care in a physician’s office (94.2%). In addition to routine medical care, 26.73% went to eye doctor, 32.28% went to the dentist, and 4.92% went to the chiropractor. Many of the respondents also reported that they are under the routine care of specialists such as oncologists, OBGYN’s, and orthopedics.

There was also a large population who reported that they get their routine care at an urgent care center (15.64%). This may be due to a lack of primary care providers and the inability to get an appointment to see them in a timely manner.

It is believed that the routine care by the listed specialists (ex. Dentist and eye doctor) was underreported. Participants were asked to check all locations that applied; however, it is theorized that they did not read all the responses and checked only physician's office even if they also routinely see the dentist.

Where they receive routine care	Response Count	Response Percent
Physician's Office	747	94.2%
Hospital Emergency Department	19	2.4%
Health Department Clinic	3	.38%
Urgent Care Center	124	15.64%
Chiropractor	39	4.92%
Medical/First Aid Center	3	.38%
Community Clinic	8	1.01%
Specialists (OBGYN, oncologist)	190	23.96%
Eye Doctor	212	26.73%
Dentist	256	32.28%

The majority of the survey participants were able to see the doctor when needed (70.54%). There were 24 people who reported that they were seldom or never able to see a doctor when needed. If they were unable to see the doctor when needed, the most common reasons were that there were no available appointments (34.11%) or that it was too expensive and they could not afford it (5.74%).

The percentage of people reporting that there were no available appointments increased from 13% in 2015 to 34.11% in 2018.

Able to see doctor when needed	Response Count	Response Percent
Always	565	70.54%
Sometimes	212	26.47%
Seldom	21	2.62%
Never	3	0.37%

Reasons for not seeing doctor	Response Count	Response Percent
No health insurance	16	2.48%
Too expensive/Can't afford it	37	5.74%
Have not met deductible for yr	12	1.86%
Lack of transportation	4	0.62%
Doctor is too far away	20	3.1%
No available appointments	220	34.11%
I was able to see a doctor when I needed one.	385	59.69%

Only 15.88% reported that they never receive medical care outside of Charles County. Nearly half of the respondents (50%) claimed that they sometimes receive medical care outside of the county.

Receive medical care outside of Charles County	Response Count	Response Percent
Always	79	9.98%
Sometimes	400	50%
Seldom	124	15.5%
Never	127	15.88%
I live in another county and receive care there.	70	8.75%

Participants were asked what medical services that they receive outside of Charles County. They were asked to check all services that were applicable. The most common medical services that people receive outside of Charles County are specialist doctor appointments (58.61%), primary care doctor appointments (24.44%), hospitalizations (20.11%), and surgery (19.32%).

Services Received Outside of County	Response Count	Response Percent
Primary Care Doctor Appointments	186	24.44%
Specialist Dr Appointments	446	58.61%
Outpatient treatment	70	9.2%
Hospitalizations	153	20.11%
Dental Appointments	141	18.53%
Mental Health or Substance Abuse Treatment	48	6.31%
Laboratory or other tests	86	11.3%
X-rays	85	11.17%
Surgery	147	19.32%
Emergency Care	83	10.91%
Prenatal care	28	3.68%
Do not travel outside Charles County	102	13.4%
I live in another county and receive care there.	88	11.56%

The participants were also asked why they chose to receive those medical services outside of Charles County. The most common responses were that the services were not available in Charles County (21.78%) and the quality of care was better elsewhere (39.26%).

Why do you travel outside of Charles County for care?	Response Count	Response Percent
Services not available within county	147	21.78%
Quality is better elsewhere	265	39.26%
Recently moved to Charles	19	2.81%

County		
Local doctors not on my insurance plan	41	6.07%
Closer to my place of work	25	3.7%
Too hard to get appointment for local doctors	38	5.63%
No physician available for the type of care I need	84	12.44%
Not applicable	144	21.33%
I live in another county and receive care there.	116	17.19%

Doctors, employers, and the Internet are highly used means for obtaining needed health information. Nurses, pharmacists, and the health department were smaller yet significant sources of health information. This particular question stresses the importance of educating local health care providers and emphasizes the need for accurate medical information on the Internet and for employee wellness programming.

Where do you get health information?	Response Count	Response Percent
Churches	10	1.28%
Primary Care Doctor	669	85.66%
Nurse	123	15.75%
Pharmacist	164	21.00%
Hospital	112	14.34%
Health Department	90	11.52%
Public Library	24	3.07%
Community Clinic	10	1.28%
Employer	157	20.10%
Internet/Websites	402	51.47%

Short Survey Responses:

20% of the short survey participants reported that access to healthcare and no health insurance is a big health problem in Charles County. This condition scored somewhere in the middle of the health conditions listed on the survey.

The most commonly cited barriers to needed health care was lack of health insurance (43%) and care is too expensive/can't afford it (57%). Under "Other", several people explained that they do not have dental or vision insurance to cover those needed services, high deductibles/co-pays, services were not covered by their insurance, and language barriers.

Focus Groups:

Many of the topics discussed at each and every focus group boiled down to issues of access to care. The most discussed topic at the community focus groups was the lack of health care providers within the county. There is a lack of primary care providers and specialists. Those in the county are overwhelmed, are not accepting no new patients, are not accepting medical assistance patients, are not spending time educating their patients on their health conditions, and are not dealing with all of their problems. Many county physicians do not accept medical assistance due to low reimbursement rates. The county is considered a “rural” community and reimbursed at a lower rate than those near DC and Baltimore. It is hard to convince a physician to open a practice in Waldorf where they get reimbursed 15% less than those practicing over the county border in Brandywine, Prince George's County. The methods for changing the reimbursement status are complicated with many hurdles that affect other populations, including farmers.

Transportation within the county and outside of the county for health care was a frequent topic at focus groups. Health services are not centrally located within the county, making it difficult for those using public transportation to get to their appointments on time and without long wait times. Doctors have many no-shows due to transportation issues. The county public transit system, VanGo, has made many changes to improve services, but the demand for their specialized services continues to increase each year.

With all of these issues and all of these resources available, it was suggested that there is a need for patient resource guides and advocates to help navigate people through the system. Other suggestions to improve access to healthcare and to improve the health of the county in general include more health education in the community and more advertising of community health programs already in place.

Focus groups mentioned the overuse of the hospital emergency department (ED). People do not get preventive care and only go when necessary. They may not have health insurance or a primary care provider so they go to the ED for care. Transportation is also an issue that leads to overuse of the ED. Many residents do not have transportation to the hospital, especially on an evening or weekend when VanGo is not running. They use the county ambulance service to get to the hospital. This is critical given the new Maryland payer system where hospitals must reduce inpatient and outpatient readmissions. The hospital-community and hospital-ambulatory care connections have been strengthened over the last 3 years in order to implement population health level initiatives aimed at ED diversion and reduction. The Charles County Mobile Integrated Healthcare Program was cited as a strength in the community that is working to reduce unnecessary hospital utilization and EMS transport among those deemed high utilizers of emergent services. The program is a collaboration between the hospital, EMS, and health department.

People also do not know where to find the health services that they need. Many health organizations within the county do not know about all of the other services available within the county. Many of the focus groups suggested a one-time stop shop for all health programs in the county. A comprehensive community resource guide and website that can be updated when needed and can be accessed by everyone in the community.

Health Literacy was a frequent topic of discussion at county focus groups. Individuals may be given a health diagnosis by their primary care providers, but they do not receive sufficient education on the health condition and how they need to self monitor and manage their disease. Additionally, individuals are signing up for health insurance through the Health benefits exchange. Some are auto-assigned to specific plans such as MedStar or Kaiser that require you to use one of their facilities for care. They have a card, but they do not know how to use it. They do not understand their benefits and what providers are within their network. Case coordination, community health workers, and patient navigators within the primary care setting and in the community are critical to assist county residents on what services are available and how to access needed health services. They are also critical in health education and outreach.

Conclusions:

Data from the 2018 Charles County Community Health Needs Assessment Report was examined against the baseline 2015 needs assessment data. The previous needs assessment data was used to develop the nine 2016-2018 Charles County Health Improvement Plan objectives. An update on the status of the Charles County health priority objectives is discussed below.

Health topics where the Charles County Health Improvement Plan Goals were met:

There were five objectives within the Charles County Health Improvement Plan that reached their anticipated goals. This means that 56% of the health improvement plan objectives (5/9) reached their goals in the 3 year time period.

3 years previous, only 40% of the health improvement plan objectives were met. The local health improvement coalition was able to increase the percentage of objectives that were met by establishing realistic goals and narrowing the focus of their 3 year work.

Cancer:

Decrease the Charles County colon and rectal cancer mortality rate from 19.4 per 100,000 to 18.0 per 100,000 (10% reduction) Source: 2014 Maryland CRF Cancer Reports

Update: According to the 2017 Maryland Cigarette Restitution Fund (CRF) Cancer in Maryland Report, the Charles County 2010-2014 average colon and rectal cancer mortality rate was 17.2 per 100,000. This is below the anticipated goal of 18.0 per 100,000.

Physician Recruitment and Retention:

Increase the number of Charles County physicians by 7 providers.

Update: The University of Maryland Charles Regional Medical Center has recruited and retained new physicians each year with 7 providers in FY16 and 3 providers in FY17. This far exceeded the goal of 7 providers set after the 2015 community health needs assessment.

Unnecessary Hospital Utilization:

Reduce the Charles County preventable hospital stay rate from 71 per 1000 Medicare enrollees to 69 per 1000 Medicare enrollees. Source: County Health Rankings

Update: The Robert Wood Johnson Foundation's 2018 County Health Rankings were released in Spring 2018. In that report, the Charles County preventable hospital stay rate was 55 per 1,000 Medicare enrollees. This was well below the goal of 69 per 1,000 Medicare enrollees. (2015 Dartmouth Atlas of Health Care from the 2018 RWJ County Health Rankings)

Mental Health:

Reduce the Charles County mental health emergency department visit rate from 3045.8 per 100,000 to 3015 per 100,000 (1% reduction). Source: 2013 Maryland HSCRC data from SHIP website

Update: The 2014 Charles County mental health emergency department visit rate was 2346.9 per 100,000 population. This rate exceeded our goal of 3015 per 100,000 population. (2014 HSCRC data from the SHIP website)

Substance Use Disorders:

Reduce the Charles County addictions-related emergency department visit rate from 1200.4 per 100,000 to 1188 per 100,000 (1% reduction) Source: 2013 Maryland HSCRC data from SHIP website

Update: The 2014 Charles County addictions-related emergency department visit rate was 991.9 per 100,000 (2014 HSCRC data from the SHIP website). This is well below our goal of 1188 per 100,000.

Health topics where the Charles County Health Improvement Plan Goals were not met:

There were 4 objectives within the Charles County Health Improvement Plan where the goals were not met. This means that 44% of the improvement plan objectives fell short of their anticipated goals.

Obesity:

Increase the percentage of Charles County adults who are at a healthy weight from 27.9% to 28.5% (2% increase). Source: 2013 Maryland BRFSS

Update: Unfortunately, the percentage of Charles County adults who are at a healthy weight decreased instead of increased from 27.9% in 2013 to 23.1% in 2015 (2015 BRFSS).

Decrease the percentage of Charles County 13-18 year older who are obese from 12.3% to 11.3% (8% reduction). Source: 2013 Maryland YRBS

Update: There was a small increase in the percentage of Charles County high school students who were obese. The percentage went from 12.3% in 2013 to 13.0% in 2016 (2016 YRBS).

Diabetes:

Reduce the Charles County diabetes emergency department visit rate from 208.7 per 100,000 to the Maryland rate of 205.0 per 100,000. Source: 2013 Maryland HSCRC data from SHIP website

Update: The 2014 Charles County diabetes emergency department visit rate was 244.2 per 100,000 (2014 HSCRC). This is an increase from 208.7 per 100,000 that was previously reported.

Major Cardiovascular Disease:

Reduce the Charles County hypertension emergency department visit rate from 308.1 per 100,000 to 305 per 100,000 (1% reduction) Source: 2013 Maryland HSCRC data from SHIP website

Update: The 2014 Charles County hypertension emergency department visit rate was 347.7 per 100,000 (2014 HSCRC). This was an increase from the previously reported rate of 308.1 per 100,000.

Health Prioritization:

After a thorough analysis of all quantitative data on the health of Charles County and of the qualitative data gathered from the community, a list of health priorities has been developed to help guide future endeavors to improve the health of Charles County.

The Steering Committee of the Partnerships for a Healthier Charles County chose to use the National Association of City and County Health Officials (NACCHO) recommended Hanlon Method for health prioritization. The *Hanlon Method for Prioritizing Health Problems* is a well-respected technique which objectively takes into consideration explicitly defined criteria and feasibility factors. Though a complex method, the Hanlon Method is advantageous when the desired outcome is an objective list of health priorities based on baseline data and numerical values.

A list of health problems was identified using the health data section of the community health needs assessment report. Then, using a scale of 0 to 10, each health problem was rated on the following criteria: size of the health problem, magnitude of the health problem, and effectiveness of potential interventions. The table below represents the numerical rating system for rating health problems against the criteria.

The Hanlon Method: Sample Criteria Rating			
Rating	Size of Health Problem (% of population w/health problem)	Seriousness of Health Problem	Effectiveness of Interventions
9 or 10	>25% (STDs)	Very serious (e.g. HIV/AIDS)	80% - 100% effective (e.g. vaccination program)
7 or 8	10% - 24.9%	Relatively Serious	60% - 80% effective
5 or 6	1% - 9.9%	Serious	40% - 60% effective
3 or 4	.1% - .9%	Moderately Serious	20% - 40% effective
1 or 2	.01% - .09%	Relatively Not Serious	5% - 20% effective
0	< .01% (Meningococcal Meningitis)	Not Serious (teen acne)	<5% effective (access to care)

The size of the problem was based on the baseline data collected on the county population through the community health needs assessment. If more than one data measure was available for a particular health topic, an average of the percentages were calculated to determine the size of the problem. Prevalence data was used whenever available; however, mortality data was used as a proxy measure when reliable prevalence sources were not available.

The seriousness of the problem was determined by asking a series of questions regarding the status of the health problem in the community. A score was determined based on the number of questions with an answer of "yes."

The seriousness of the problem questions included:

- Does it require immediate attention?

- Is there a public demand?
- What is the economic impact?
- What is the impact on quality of life?
- Is there a high hospitalization rate?
- Is the disparity between the county rate and state and national rates?
- Do racial/age/gender/ethnic disparities exist?

The effectiveness of the interventions was determined using the Centers for Disease Control and Prevention's (CDC) Guide to Community Preventive Services. The guide gives examples of evidence-based strategies that have been implemented to address each health problems. Systematic reviews are conducted on all available interventions, and they rank the evidence-based strategies as: recommended, not recommended, or insufficient evidence. The basis of the rankings are presented below.

Recommended:

The systematic review of available studies provides strong or sufficient evidence that the intervention is effective.

The categories of "strong" and "sufficient" evidence reflect the Task Force's degree of confidence that an intervention has beneficial effects. They do not directly relate to the expected magnitude of benefits. The categorization is based on several factors, such as study design, number of studies, and consistency of the effect across studies.

Recommended Against:

The systematic review of available studies provides strong or sufficient evidence that the intervention is harmful or not effective.

Insufficient Evidence:

The available studies do not provide sufficient evidence to determine if the intervention is, or is not, effective. This does **NOT** mean that the intervention does not work. It means that additional research is needed to determine whether or not the intervention is effective.

Task Force findings may include a rationale statement that explains why they made a recommendation or arrived at other conclusions.

To determine the effectiveness of interventions, we calculated the percentage of available interventions that received a recommended score from the CDC's Guide to Community Preventive Services.

Information was available in the guide for all health problem in our list.

Based in the three criteria rankings assigned to each health problem in Step 1 of the Hanlon Method, we calculated the priority scores using the following formula:

$$D = [A + (2 \times B)] \times C$$

Where: D= Priority Score

A= Size of the health problem ranking

B= Seriousness of the health problem ranking

C= Effectiveness of the Intervention ranking

* Note: Seriousness of health problem is multiplied by two because according to the Hanlon technique, it is weighted as being twice as important as size of the health problem.

Based on the priority scores calculated in Step 2 of the Hanlon Method, we assigned ranks to the health problem with the highest priority score receiving the rank of 1, the next high priority score receiving a rank of 2, and so on. The table below represents the results of our Hanlon Method ranking and priority scoring.

<u>Health Problem:</u>	<u>Size (A)</u>	<u>Seriousness (B)</u>	<u>Effectiveness of Intervention (C)</u>	<u>Priority Score (A+2B)C</u>	<u>Rank</u>
<i>Heart Disease</i>	10	8	10	260	1
<i>Diabetes</i>	7	9	9	225	3
<i>Asthma</i>	8	5	7	126	7
<i>Cancer</i>	9	6	6	126	7
<i>Mental Health</i>	7	10	9	243	2
<i>Tobacco Use/Smoking</i>	8	6	5	100	10
<i>Injuries</i>	5	4	7	91	11
<i>Hypertension/Stroke</i>	10	8	10	260	1
<i>Obesity/Overweight</i>	10	9	6	168	6
<i>Dental health</i>	6	5	5	80	12
<i>Access to Care</i>	9	8	7	175	5
<i>Infant Mortality</i>	4	4	10	120	8
<i>STI/HIV/AIDS</i>	5	6	7	119	9
<i>Substance Use Disorders</i>	10	9	8	224	4

Based on the priority score from the Hanlon Method, the health priorities chosen include:

1. Chronic Disease Prevention and Management

- Major Cardiovascular Disease (Heart Disease, Hypertension, and Stroke)
- Obesity and Overweight
- Diabetes Prevalence

2. Behavioral Health

- Substance-related Disorders
- Mental Health

3. Access to Care

- Provider Recruitment and Retention, specifically for Mental Health
- Unnecessary Hospital Utilization
- Social Determinants of Health (transportation, health literacy)