INTRODUCTION
The Howard County Health Assessment Survey (HCHAS) is a public study that was developed to assess health-related behaviors and risk factors among the adult population of Howard County (the county), Maryland. Results of this study enable local government, health providers and stakeholders to measure progress and determine where to focus resources so that health outcomes can be improved, health disparities reduced, and the community can become healthier. This is a biennial study that was first conducted in 2012, updated in 2014, 2016, and will be conducted again in 2018.

METHODOLOGY
The HCHAS was commissioned by the Horizon Foundation, the Howard County Health Department, Howard County General Hospital, and the Columbia Association. OpinionWorks, LLC, provided the technical aspects of the survey, including recommendations on the precise wording of questions, population sampling, and telephone data collection.

Selecting and Weighting Respondents
More than 2,000 interviews were conducted between April and July of 2016. In order to be compared geographically, the county was divided into five sampling areas, based on the seven regional planning areas, with the three westernmost planning areas combined into a single sampling area. Howard County households were dialed at random, and the first adult to answer the phone was asked to participate in the survey. Caregivers were not allowed to answer for others; answers for all study respondents reflected their own characteristics and experience.

As is common with telephone surveys, some populations were underrepresented while other groups were overrepresented. To ensure the survey results reflected the characteristics of the county, a statistical procedure known as weighting was used. The demographic profile of the survey was adjusted to be similar to the actual population, based on the most recent U.S. Census data. In short, the answers from those groups underrepresented in the sample count more when totaling responses and calculating averages to accurately represent all residents.

The Survey Questions
The organizations sponsoring HCHAS jointly determined the questions that were asked. The survey approach, methodology, and questions were modeled after the Centers for Disease Control and Prevention’s Behavioral Risk Factor Surveillance System (BRFSS). This allows results from national studies to be more effectively compared Howard County results. Additional questions were added to the 2016 survey to gain more detailed information in certain areas, like Advance Care Planning.

RESULTS
Howard County is, on average, healthier than the rest of the country, but significant health challenges persist – especially among those with lower levels of income and education, as well as health outcomes related to everyday choices about smoking, drinking, diet, and exercise.

Access to Affordable Care
The survey revealed that 15,670 residents currently do not have health insurance coverage. This number has decreased by about 2,250 since 2012. However, problems of inequality compared by income, race and education still remain. While 95% of residents have some type of health care coverage, only 87% of respondents in households making less than $50,000 a year have coverage, and only 76% of those with less than a high school diploma or GED have coverage.
Although there has been advancement in this area, access remains an area of difficulty for some residents. With 96% of White residents and 94% of African American and Asian residents reporting health coverage, only 79% of Hispanic residents report the same. Marital status also affected access to health care. For example, while 97% of married couples say they have some type of health insurance, only 83% of unmarried couples and 89% of single respondents were insured.

**Behavioral Health and Addictions**
Women were more likely than men to report taking medication or receiving treatment from a doctor or other health professional for a mental or emotional condition (15% vs. 7%), an increase from 2014. In 2016, about the 28% of residents reported being sometimes, usually or always stressed about money for vital expenses, such as rent, mortgage, and food. However, respondents who identified their race as African-American, Hispanic, or Other were more likely to experience this type of stress. Fifty-four percent of White residents said they were never stressed about money for vital expenses, compared with 41% of African-Americans, 37% of Hispanics, and 36% of those in the Other category.

**Chronic Diseases**
The survey included questions about many chronic diseases, including cancer, heart disease, stroke, and diabetes. Slightly more than one-quarter (26%) of residents have been told by a health professional that they have high blood pressure. Of those who have been told they have high blood pressure, 75% are currently taking medications to control it.

Diabetes continues to be a concern for many residents. Although numbers have improved slightly since 2014, 7% percent of residents have been told they have diabetes. Of those who have not been told they have diabetes, 7% have been told they have pre-diabetes or borderline diabetes. Twenty-four percent of residents reported being diagnosed with diabetes when they were less than 40 years old, a 4% increase since 2014 while 32% reported being diagnosed between age 50-59, a 10% increase since 2014.

**Healthy Weight, Exercise and Nutrition**
Sixty percent of Howard County respondents reported BMI scores in the overweight or obese range, compared with 65% of Marylanders. Although fewer Howard County residents were overweight or obese compared to the State, many survey participants reported behaviors that contribute to unhealthy weight, including lack of exercise and low consumption of fruits and vegetables. Approximately 15% of residents report eating 3 or more daily servings of fruit or vegetables and roughly 65% have at least 1 serving daily, although at least 5 per day is recommended. When broken down by income, more than 40% of residents earning less than $50,000 are getting less than one serving per day of fruit or vegetables.

**Tobacco Usage**
Twenty-eight percent of residents said they have smoked at least 100 cigarettes in their life. This percentage is slightly less than the 29% measured in 2014. Eight percent of residents who have smoked at least 100 cigarettes in their life said they now smoke every day or some days, which is on par with the measurement in both 2012 and 2014.

Usage of alternative tobacco products such as chewing tobacco, snuff, or snus remains low in Howard County, with just 1.5% of residents reporting use in 2016. However, residents aged 18-35 have the greatest percentage of utilization with roughly 3.5% reporting use every day or some days.
Health and Aging
Ninety-eight percent of residents aged 55 or older have health care coverage and 88% have a personal health care provider. More than 70% of residents in this age group with chronic conditions such as high blood pressure or high cholesterol report use of a medication regimen to control the condition. Older Howard County residents are also less likely to smoke cigarettes, with less than 2% of residents age 65 or older smoking every day or some days.

CONCLUSION
The 2016 HCHAS provides the most detailed data collected about how health behaviors and needs vary across different demographic groups in the county. The data from the 2012, 2014, and 2016 surveys have provided us with health trends for our county and will be repeated again in 2018. The Howard County Health Department and partners will continue to work together to update information, conduct studies, and ensure resources are focused where greatest need meets greatest opportunity to improve the health of all residents of Howard County.