

DISABILITY AND HEALTH AMONG MARYLAND ADULTS

One in five non-institutionalized Maryland adults has one or more disability. People with disabilities experience significant barriers accessing health care services and present higher rates of behavioral risk factors than people without disabilities.¹ Maryland adults with disabilities report higher rates of depressive disorders, arthritis, asthma, kidney disease, cancer, diabetes, hypertension (high blood pressure), cardiovascular disease, and obese weight classification than Maryland adults without disabilities. Public health practitioners, people with disabilities, and advocates can use this document to understand the burden of disease among Maryland adults with disabilities and to inform programs and policies that address health risk behaviors and chronic disease outcomes among this population.

BACKGROUND

People with disabilities face significant barriers to maintaining good health despite growing evidence that physical activity and balanced dietary behaviors promote positive health outcomes. The Centers for Disease Control and Prevention (CDC) reports that people with disabilities face substantial barriers to accessing health care.² The barriers include prohibitive costs, limited availability of services, physical barriers, and inadequate skills and knowledge of health workers.³ This population also experiences attitudinal, communication, policy, social, and transportation barriers to accessing health care services.² People with disabilities face substantial challenges incorporating physical activity and healthful nutritional choices into their daily lives, and they have higher rates of secondary conditions (such as pain) and co-morbid conditions (such as diabetes).³ The CDC provides a Disability and Health Data System to understand and monitor the health of people with disabilities: www.cdc.gov/ncbddd/disabilityandhealth/dhds.html.

METHODS

Conducting under CDC guidance, the Maryland Behavioral Risk Factor Surveillance System (BRFSS) is a telephone-based health survey of adult Maryland residents that provides statewide prevalence of chronic health conditions, health-related behaviors, use of preventive services, and access to care. This brief reviews disability status data in relation to overall health status, behaviors, and chronic health conditions.

The 2016 Maryland BRFSS survey included six nationally-recognized disability status questions.⁴ Respondents who answered “yes” to one or more questions about cognitive, mobility, vision, hearing, self-care, and/or independent living disability were classified as having a disability. Respondents who said “no” to all six questions were classified as not having disabilities.

The 2016 BRFSS survey included questions about chronic health conditions, and respondents were asked if they had ever been told by a doctor, nurse, or other health professional that they had specific conditions, including asthma, diabetes, and high blood pressure.

Respondents who said “yes” to asthma were asked: “Do you still have asthma?” Female respondents who said “yes” to diabetes or to hypertension were asked: “Was this only when you were pregnant?” Records for women who

Table 1: Maryland adults reporting disability

	%	95% CI
One or more disability	21.6	(20.7 – 22.6)
Disability Type		
Cognitive disability	8.8	(8.1 – 9.5)
Mobility disability	11.4	(10.8 – 12.1)
Vision disability	3.1	(2.7 – 3.5)
Hearing disability	4.1	(3.7 – 4.5)
Self-care disability	2.6	(2.2 – 2.9)
Independent living disability	5.7	(5.2 – 6.3)

were told they have diabetes only when they were pregnant were excluded from analysis. Records for women who were told they have high blood pressure only during pregnancy and records for respondents who stated that they have borderline high blood pressure were excluded from analysis. Survey respondents also self-reported demographics including height and weight as part of the core survey. Body Mass Index (BMI) was calculated by CDC using a standard formula.⁵

To improve the generalizability of the data, making it possible to draw conclusions about the health of Marylanders, CDC weighted survey data using iterative proportional fitting, also known as raking, to account for demographic differences between the survey sample and Maryland’s population.

RESULTS

One in five (21.6 percent) Maryland adults reported one or more disability. One in 11 (8.8 percent) reported a cognitive disability, one in nine (11.4 percent) reported a mobility disability, One in 32 (3.1 percent) reported a vision disability, One in 24 (4.1 percent) reported a hearing disability, One in 38 (2.6 percent) reported a self-care disability, and One in 18 (5.7 percent) reported an independent living disability (Table 1).

The prevalence of disability was assessed by demographic groupings. The prevalence of disability was higher for women than for men (23.3 vs. 19.8 percent). The prevalence of disability was similar for younger age groups (15.4 percent age 18 to 24; 15.9 percent age 25 to 34, and 13.1 percent age 35 to 44) but increased after age 44 (19.6 percent age 45 to 54 vs. 44 percent age 75 and older). White non-Hispanics, Black non-Hispanics, and Hispanics reported similar prevalence of disability (22.6, 22.7, and 17.5 percent respectively), while adults reporting “other” race reported significantly higher rates of disability (31 percent) and Asian non-Hispanics reported significantly lower rates of disability (9.6 percent). The prevalence of disability was highest for adults with less education and lower household incomes (36.2 percent less than high school vs. 11.8 percent college graduate; 51.5 percent less than \$15,000 vs. 10.7 percent \$75,000 or more). The prevalence of disability was highest among retired adults (35.7 percent) and adults unable to work (83 percent); however, unemployed adults (which does not include adults who stated they are unable to work) reported higher rates of disability than employed adults (29.3 vs. 12.2 percent).

Table 2: Maryland adults reporting one or more disability

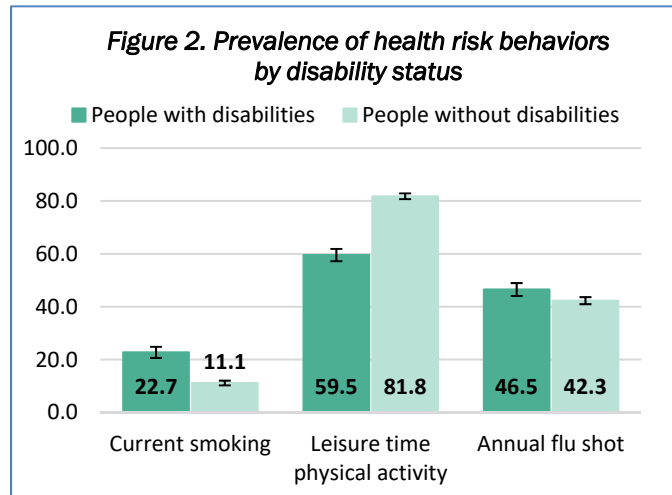
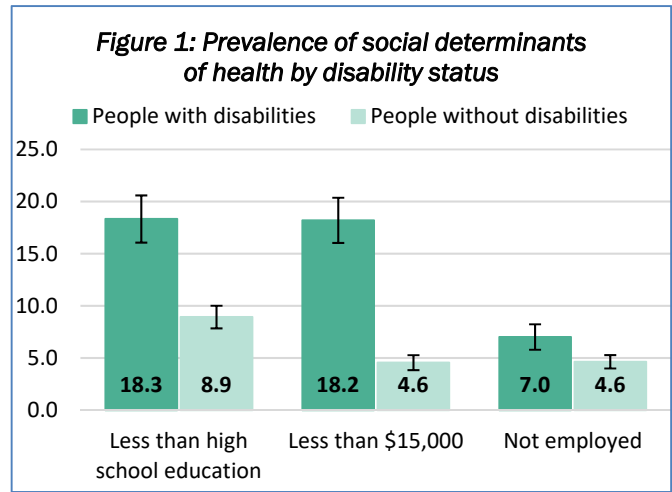
	%	95% CI
Statewide	21.6	(20.7 – 22.6)
Gender		
Male	19.8	(18.4 – 21.3)
Female	23.3	(22.0 – 24.5)
Age		
Age 18-24	15.4	(11.8 – 19.0)
Age 25-34	15.9	(13.2 – 18.5)
Age 35-44	13.1	(11.1 – 15.1)
Age 45-54	19.6	(17.6 – 21.7)
Age 55-64	26.8	(24.8 – 28.8)
Age 65-74	29.7	(27.4 – 31.4)
Age 75+	44.0	(41.3 – 46.8)
Race/Ethnicity		
White non-Hispanic	22.6	(21.4 – 23.7)
Black non-Hispanic	22.7	(20.8 – 24.6)
Asian non-Hispanic	9.6	(5.9 – 13.3)
Hispanic	17.5	(13.4 – 21.7)
Other	31.0	(25.8 – 36.2)
Education		
Less than high school	36.2	(31.7 – 40.6)
High school or GED	26.0	(24.1 – 27.9)
Some college or technical school	24.0	(22.1 – 25.9)
College graduate	11.8	(10.9 – 12.7)
Annual Household Income		
Less than \$15,000	51.5	(46.3 – 56.8)
\$15,000 to less than \$25,000	34.1	(30.5 – 37.7)
\$25,000 to less than \$50,000	25.9	(23.3 – 28.5)
\$50,000 to less than \$75,000	20.3	(17.7 – 22.9)
\$75,000 or more	10.7	(9.7 – 11.8)
Employment		
Employed	12.2	(11.1 – 13.2)
Not employed	29.3	(24.6 – 34.1)
Student/Homemaker	17.4	(14.0 – 20.9)
Retired	35.7	(33.8 – 37.5)
Unable to work	83.0	(79.0 – 87.0)
Home Ownership		
Own	19.9	(18.9 – 21.0)
Rent	25.6	(23.5 – 27.6)
Insurance Status		
Have health coverage	21.9	(20.9 – 22.8)
Do not have health coverage	19.0	(15.0 – 23.0)

Renters reported higher rates of disability than homeowners (25.6 vs. 19.9 percent). There was no significant difference in disability reported by adults with and without health coverage (Table 2).

Marylanders with disabilities reported less than high school education (18.3 vs. 8.9 percent) more frequently than Marylanders without disabilities. They also reported low household income (below \$15,000: 18.2 vs. 4.6 percent), and unemployment (7 vs. 4.6 percent) more frequently than Marylanders without disabilities (Figure 1).

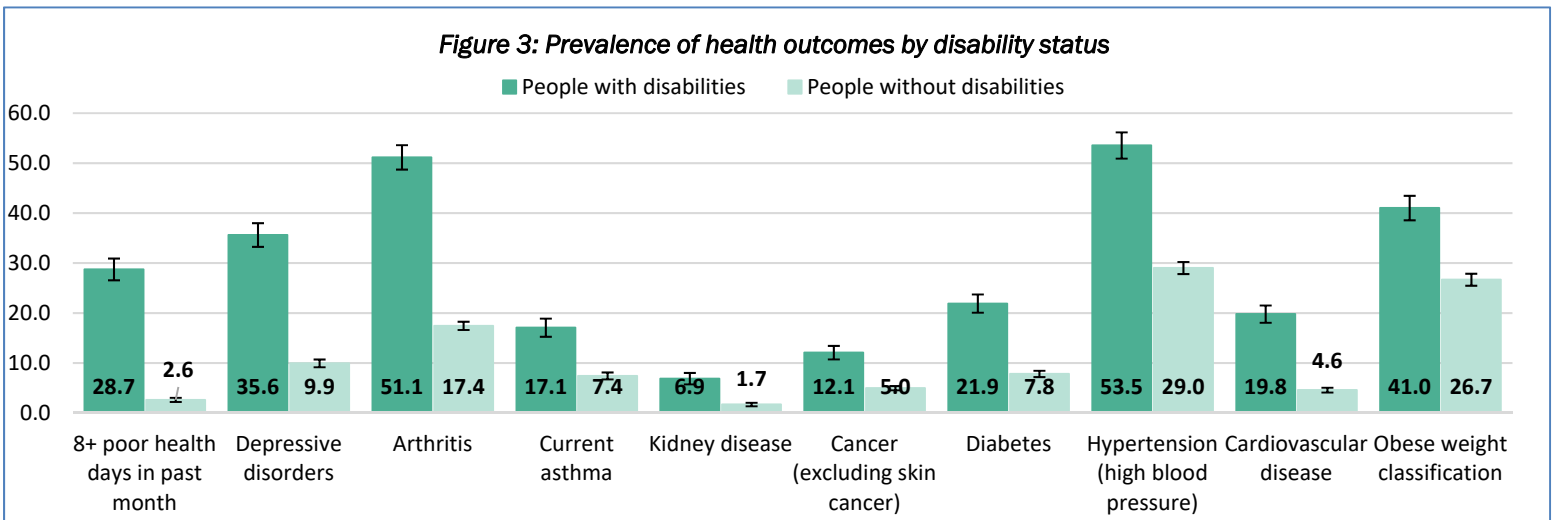
The prevalence of health-risk behaviors was also assessed. Compared to those without disabilities, people with disabilities reported higher prevalence of current smoking (22.7 vs. 11.1 percent) and lower prevalence of leisure time physical activity (59.5 vs. 81.8 percent). People with disabilities reported slightly higher prevalence of annual flu vaccination (46.5 vs. 42.3 percent) compared to people without disabilities (Figure 2).

Compared to people without disabilities, people with disabilities reported significantly higher rates of eight or more poor health days in the past month (28.7 vs. 2.6 percent), depressive disorders (35.6 vs. 9.9 percent), arthritis (51.1 vs. 17.4 percent), current asthma (17.1 vs. 7.4 percent), kidney disease (6.9 vs. 1.7 percent), cancer (excluding skin cancer) (12.1 vs. 5 percent), diabetes (21.9 vs. 7.8 percent), hypertension (53.5 vs. 29 percent), cardiovascular disease (19.8 vs. 4.6 percent), and obese weight classification (41 vs. 26.7 percent) (Figure 3).



CONCLUSIONS

More than 20 percent of Maryland adults reported having a disabling condition. The prevalence of disability was higher among women, certain racial and ethnic groups, people with less education, people with lower incomes, the unemployed, and renters. Data provided by the Maryland BRFSS demonstrate correlation, but do not point to the causes of health disparities. It is important to continue surveillance efforts to understand the impact and



distribution of disability among Maryland adults over time to inform public health and health care organizations as they develop accessible public health programs.

By improving the availability of disability and health data, researchers and public health professionals may increase understanding of the needs of people with disabilities and be better equipped to enhance programs to address the various needs of this population. These efforts may support identification and implementation of effective prevention and health promotion efforts within this population and allow for monitoring of changes in the health status of people with disabilities over time.

To address the needs of people with disabilities, the Maryland Department of Health's Disability Health Inclusion Program recommends public health staff, medical professionals, and others who work with people with disabilities recognize this population as an at-risk, priority population for wellness promotion initiatives and consider taking the following steps to support the health of people with disabilities:

- Incorporate people with disabilities in the coalition building, assessment, planning, implementation, and evaluation to build inclusive communities, public health programs, and systems.
- Use data to identify and address secondary and co-morbid conditions most significantly impacting people with disabilities.
- Include standard disability indicators in public health surveillance systems.
- Use disability status as a demographic variable in data analysis and reporting.
- Promote active lifestyles through inclusive policies and accessible recreation spaces.
- Provide people with disabilities with tools and resources to promote healthy behaviors, such as the Diabetes Prevention Program (www.BeHealthyMaryland.org).
- Promote use of smoking cessation programs such as the Maryland Tobacco Quitline (available at smokingstopshere.com or 1-800-QUIT-NOW)
- Develop communication plans to ensure accessible options for people with disabilities.
- Defend access to high-quality, affordable health care.
- Recognize that people with disabilities are disproportionately affected by social determinants of health including low income, less than high school education, and unemployment.

Maryland's Disability Health Inclusion Program provides training, technical assistance, and resources to support inclusive public health programs. To learn more, please contact MDH's Center for Chronic Disease Prevention and Control at mdh.chronicdiseaseinfo@maryland.gov.

This publication was supported by Cooperative Agreement number U58DP006039, funded by the Centers for Disease Control and Prevention. Its contents are solely the responsibility of the authors and do not necessarily represent the official views of the Centers for Disease Control and Prevention or the Department of Health and Human Services.

All data presented in this report were produced by the Maryland BRFSS program using data from the 2016 Maryland BRFSS survey unless otherwise noted.

Suggested Citation: Lavetsky G, Ashingurst E. Disability and Health among Maryland Adults. Maryland BRFSS Surveillance Brief. Vol. 3, No. 1. Baltimore, MD: Maryland Department of Health, Center for Chronic Disease Prevention and Control, August 2018.

References:

- 1 Courtney-Long EA, Carroll DD, Zhang Q, et al. Prevalence of Disability and Disability Type among Adults, United States – 2013. *MMWR Morb Mortal Wkly Rep* 2015; 64: 777-783. <https://www.cdc.gov/mmwr/pdf/wk/mm6429.pdf>, accessed November 1, 2017.
- 2 Centers for Disease Control and Prevention. Disability and Health. Common Barriers to Participation Experienced by People with Disabilities. <https://www.cdc.gov/ncbddd/disabilityandhealth/disability-barriers.html>, accessed November 9, 2017
- 3 "Disability and Health." World Health Organization, World Health Organization, Nov. 2016. www.who.int/mediacentre/factsheets/fs352/en/, accessed on October 23, 2017.
- 4 U.S. Department of Health and Human Services HHS Implementation Guidance on Data Collection Standards for Race, Ethnicity, Sex, Primary Language, and Disability Status. <https://aspe.hhs.gov/basic-report/hhs-implementation-guidance-data-collection-standards-race-ethnicity-sex-primary-language-and-disability-status>, accessed on May 25, 2017.
- 5 Centers for Disease Control and Prevention. Healthy Weight. About Adult BMI. www.cdc.gov/healthyweight/assessing/bmi/adult_bmi/index.html, accessed on May 17, 2017.

