

MICHIGAN BRFSS SURVEILLANCE BRIEF



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Subjective Cognitive Decline Among Older Michigan Adults

In 2019, one in eight Michigan adults aged 45 years and older who were surveyed reported a subjective cognitive decline (SCD), such as memory loss and/or confusion. This number has dropped since 2015. This surveillance brief examines the prevalence of SCD among older Michigan adults stratified by demographics. Additionally, this brief compares the prevalence of health outcomes among those who reported SCD and among those who did not report SCD. By increasing cognitive screening and assessment, health care providers can address cognitive decline at earlier stages and implement strategies to improve health outcomes as cognitive decline progresses.

Background

Cognitive health is part of overall health. Cognitive changes can have many underlying causes, ranging from treatable conditions, e.g., dehydration, physical illness, and medications to progressive neurological diseases, e.g., Alzheimer's disease, and Parkinson's disease. Emotional distress, such as grief, depression, and anxiety can also contribute to changes in cognitive abilities and confusion.

In 2019, 89.9% of Michigan adults reporting SCD had at least one chronic illness, yet less than half of the respondents had discussed cognitive changes with their physician. It is important all adults recognize cognitive changes as a symptom and seek professional advice. Multiple chronic diseases (two or more) have been found to be associated with increased cognitive decline.

Methods

The Michigan Behavioral Risk Factor Surveillance System (BRFSS) is a telephone-based health survey of adult Michigan residents that provides statewide prevalence of chronic health conditions, health-related behaviors, medical conditions, and preventive health care practices. The Michigan BRFSS provides cross-sectional data, and a temporal relationship cannot be established. To improve the generalizability of the data, making it possible to draw conclusions about the health of Michiganders, CDC weighted survey data using iterative proportional fitting, also known as raking, to account for demographic differences between the survey sample and Michigan's population.

The 2017-2019 Michigan BRFSS survey included the cognitive decline module administered to adults 45 years and older. Respondents who answered "yes" to the first question about experiences of confusion or memory loss during the previous 12 months were classified as having SCD. Respondents who said "yes" to the first question were asked additional questions about the impact of confusion or memory loss on their daily lives, including: how often they had given up day-to-day household activities or chores; how often they needed assistance with these activities; how often they were able to get the help they needed; and the degree to which confusion or memory loss interfered with their ability to engage in work, volunteer activities, or social activities. Respondents were also asked if they or anyone else had discussed their confusion or memory loss with a health care professional.

In this brief, the prevalence of SCD among Michigan adults 60 years and older was assessed by age, gender, race/ethnicity, education, household income, insurance status, and disability status. The life impact of cognitive decline was also examined. In addition, the prevalence of health outcomes among those reporting SCD was compared to that among those not reporting SCD.

Results

Prevalence of Subjective Cognitive Decline

Based on 2017-2019 Michigan BRFSS data, an estimated one in nine (11.3%) Michigan adults over the age of 60 reported having SCD during the past 12 months. The prevalence of SCD was similar across gender and race/ethnicity (Table 1). The prevalence of SCD was significantly higher for:

- Older adults (14.2% for adults 75 years and older vs. 10.1% for adults aged 65-74 years),
- Adults with lower education (14.9% for those with education less than high school vs. 8.2% among those with college graduate),
- Adults with lower annual household income (19.2% of those earning less than \$20,000 vs. 7.2% of those earning \$75,000 or more),
- Adults reporting disability (22.4% for adults reporting disabilities vs. 4.3% for adults not reporting disability).

The life impact of cognitive decline was also examined:

- 28.8% reported “always” or “usually” or “sometimes” when asked how often there was a need to give up day-to-day household activities or chores as a result of confusion or memory loss.
- 26.3% reported “always” or “usually” or “sometimes” when asked how often assistance is needed with day-to-day activities.
- 88.8% reported “always” or “usually” or “sometimes” when asked how often they were able to get the help they needed among respondents who stated that they need help “always” or “usually” or “sometimes” with day-to-day activities.
- 21.8% reported “always” or “usually” or “sometimes” when asked how often confusion or memory loss interfered with ability to work, volunteer, or engage in social activities outside the home.
- 39.1% reported “yes” when asked whether they or anyone else discussed confusion or memory loss with a health care professional.

Table 1. Prevalence of Subjective Cognitive Decline among Adults 60 Years and Older by Characteristics, Michigan, BRFSS 2017-2019

	%	95% CI
Statewide	11.3	(10.2-12.5)
Age		
60-64	10.3	(8.2-12.9)
65-74	10.1	(8.5-11.9)
75+	14.2	(12.0-16.7)
Gender		
Male	10.8	(9.2-12.6)
Female	11.7	(10.2-13.5)
Race/Ethnicity		
White non-Hispanic	11.5	(10.3-12.9)
Black non-Hispanic	10.5	(7.0-15.5)
Other non-Hispanic	*	
Hispanic	*	
Education		
Less than high school	14.9	(10.1-21.6)
High school graduate	12.7	(10.6-15.1)
Some college	11.3	(9.4-13.5)
College graduate	8.2	(6.8-9.9)
Household Income		
< \$20,000	19.2	(15.0-24.3)
\$20,000 - \$34,999	11.4	(9.1-14.3)
\$35,000 - \$49,999	11.1	(8.4-14.5)
\$50,000 - \$74,999	9.9	(7.3-13.4)
\$75,000 +	7.2	(5.5-9.3)
Health Insurance		
Insured	11.3	(10.1-12.6)
Uninsured	*	
Disability Status		
No disabilities	4.3	(3.5-5.3)
With disabilities	22.4	(20.0-25.1)

CI = confidence interval.

*Data suppressed due to fewer than 50 respondents or relative standard error $\geq 30.0\%$.

What is the Michigan Behavioral Risk Factor Surveillance System (MiBRFSS)?

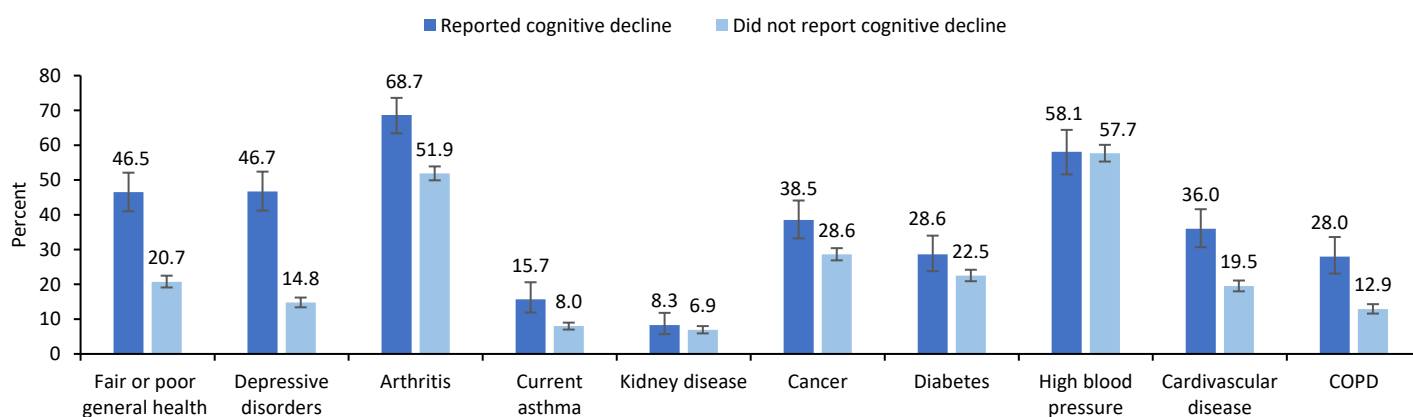
The MiBRFSS comprises annual, statewide telephone surveys of Michigan adults aged 18 years and older and is part of the national BRFSS coordinated by the CDC. The MiBRFSS follow the CDC BRFSS protocol and use the standardized English core questionnaire that focuses on various health behaviors, medical conditions, and preventive health care practices related to the leading causes of mortality, morbidity, and disability. Landline and cell phone interviews are conducted across each calendar year. Data are weighted to adjust for the probabilities of selection and a raking weighting factor is used to adjust for the distribution of the Michigan adult population based on eight demographic variables. All analyses are performed using SAS-callable SUDAAN® to account for the complex sampling design.

Cognitive Health and Health Outcomes

Based on 2017-2019 Michigan BRFSS data, there were significant differences in the self-reported health status of those reporting SCD and those not reporting SCD. “Fair” or “poor” health was reported by 46.5% of those reporting SCD vs. 20.7% of those not reporting SCD (Figure 1).

The prevalence of depressive disorders, arthritis, current asthma, cancer, cardiovascular disease, and chronic obstructive pulmonary disease (COPD) was significantly higher among those reporting SCD than among those not reporting SCD. The prevalence of kidney disease, diabetes, and high blood pressure also appeared higher among those reporting SCD, but those differences were not statistically significant (Figure 1).

Figure 1. Prevalence of Health Outcomes by Cognitive Health Status among Adults 60 Years and Older, Michigan, BRFSS 2017-2019



*Error bars represent 95% confidence intervals.

Discussion

Cognitive health is an important public health issue and associated with chronic conditions. From the 2019 Michigan BRFSS data, about nine in 10 (89.9%) Michigan respondents (45 years and older) reporting SCD also reported having at least one chronic condition. Roughly two-thirds (69.0%) of Michigan respondents with SCD reported two or more chronic conditions. Nearly 30% (27.6%) of Michigan respondents with SCD reported having heart disease/stroke. One limitation noted that the Michigan BRFSS provides cross-sectional data, and a temporal relationship cannot be established. We can only examine the association between SCD and health outcomes and cannot assess the causation relationship from the Michigan BRFSS data.

The aging network, through the Aging and Adult Services Agency and Area Agencies on Aging, recognizes key factors that contribute to cognitive health: nutrition, activity level, and disease management. Through nutrition programs, we support healthy food choices. Community agencies provide opportunities for engagement and activities, and an array of supportive services support those with chronic conditions. Area Agencies and their service providers educate people about modifiable risk factors, encourage early assessment and intervention of physical conditions, and provide counseling and supports to older adults and their families. Through education, information, and care planning assistance, the aging network supports the health and well-being of many older adults.

The CDC’s Healthy Brain Initiative recognizes that public education about the importance of managing chronic diseases, especially coronary heart disease or stroke, is vital to long-term cognitive health. Adults of all ages are encouraged to discuss cognitive health during routine medical office visits, as cognitive changes may indicate untreated diseases or health conditions. Through partnerships and collaboration, we seek to educate people on risk factors linked to cognitive changes and support persons living with dementia and their families.

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