

# Self-reported Health Status

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**Definition:** Self-reported health status predicts future risk of functional ability, hospitalization and death. This chapter focuses on adults who respond "fair" or "poor" to a question on the Behavioral Risk Factor Surveillance System that asks, "Would you say that in general your health is excellent, very good, good, fair or poor?"

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## Summary

Self-reported current health status is a good predictor of future disability, hospitalization and mortality.<sup>1,2,3,4,5</sup> In 2010, 13% ( $\pm < 1\%$ ) of Washington adults reported fair or poor health on the [Behavioral Risk Factor Surveillance System](#) survey, compared to 16% ( $\pm < 1\%$ ) nationwide. Crude rates did not differ from age-adjusted rates.

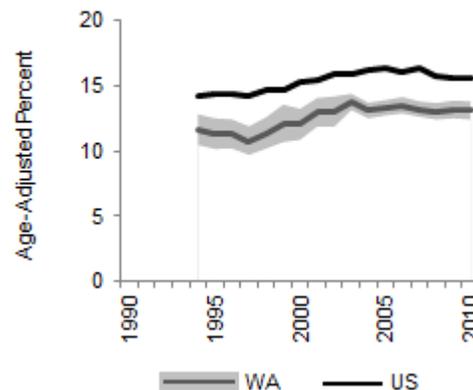
Not surprisingly, older adults in Washington were more likely to report fair or poor health than younger adults. Education and income were associated with health status, even after accounting for other factors such as age. A larger percent of people with a high school education or less reported fair or poor health (21%  $\pm 1\%$ ) compared to those who completed college (7%  $\pm < 1\%$ ). Similarly, 30% ( $\pm 1\%$ ) of those with annual household incomes less than \$25,000 reported fair or poor health compared to only 6% ( $\pm 1\%$ ) of those with annual household incomes of \$75,000 or more.

Evidence-based programs that help people prevent or manage chronic diseases and disability, if sustained over time, lead to a reduction in the percentage of people reporting fair or poor health. Programs to reduce smoking, increase physical activity and healthy eating, and promote early diagnosis and effective management of chronic diseases can affect a large portion of Washingtonians. Improvements in social, economic and environmental conditions can positively affect health, and thus also influence self-reported health status. Other chapters in the *Health of Washington State* discuss proven intervention strategies.

## Time Trends

Data from the Behavioral Risk Factor Surveillance System (BRFSS) survey show that, since 1994, a smaller percentage of adults living in Washington State reported fair or poor health status than those in the United States as a whole, adjusting for age. In 1994, 12% ( $\pm 1\%$ ) of Washington adults said their health was fair or poor. That percentage rose slightly between 1994 and 2003, but has remained stable since.

**Self-Reported Fair or Poor Health  
Washington State and US  
Washington BRFSS, 1994–2010**

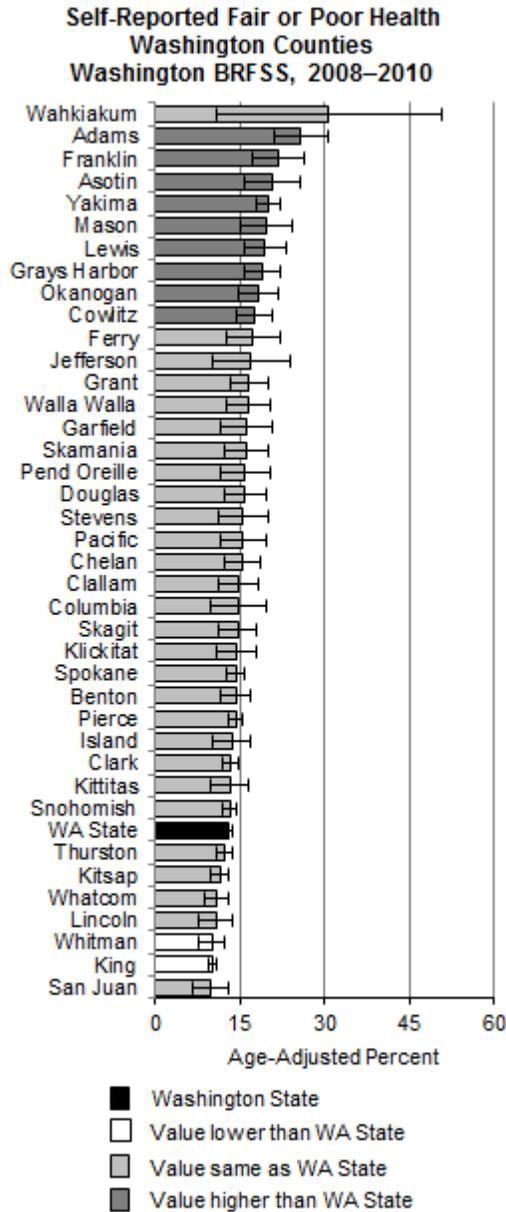


## 2020 Goals

*Healthy People 2020* uses both self-reported health and physically and mentally unhealthy days to measure general health status. General health status is one of four indicators that *Healthy People 2020* labels as Foundation Health Measures.<sup>6</sup> While *Healthy People 2020* has not yet set targets for self-reported health status or unhealthy days, the Healthy People initiative will monitor these measures to assess progress toward promoting health, preventing disease and disability, eliminating disparities and improving quality of life.

## Geographic Variation

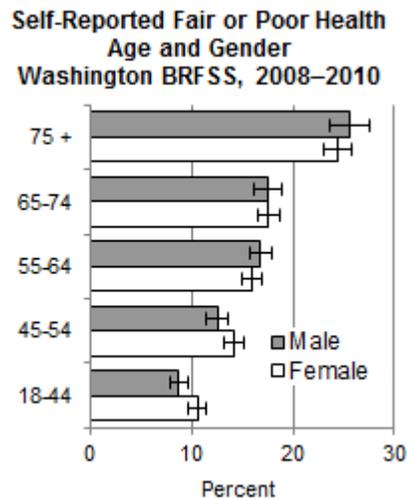
Data from Washington State's BRFSS survey for 2008–2010 combined showed that 13% ( $\pm < 1\%$ ) of adults said they had fair or poor health, adjusting for age.



- In Whitman and King counties, residents were less likely to say their health was fair or poor compared to the whole state.
- In Adams, Franklin, Asotin, Yakima, Mason, Lewis, Grays Harbor, Okanogan and Cowlitz counties, residents were more likely to report fair or poor health compared to the whole state.

## Age and Gender

With increasing age, health tends to decline. Age was a strong predictor of self-reported health status. Washington BRFSS data for 2008–2010 combined showed that as age increased, adults were more likely to say they had fair or poor health. Less than one in 10 adults ages 18–44 reported fair or poor health, compared to roughly one in four adults ages 75 and older. About the same percentages of men and women within each age group reported fair or poor health.

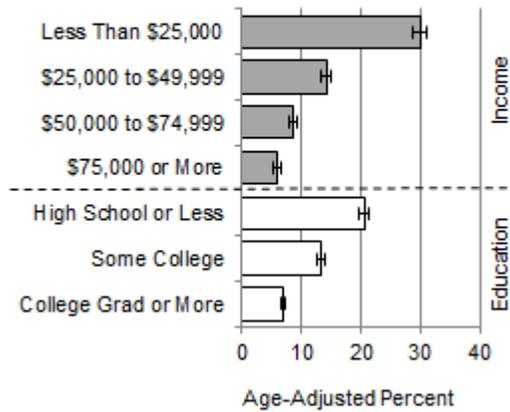


## Economic Factors and Education

**Annual household income.** Household income was a strong predictor of self-reported health status, even when accounting for age, education, race and ethnicity. Washington State BRFSS data for 2008–2010 combined showed that adults from lower income households were more likely than those in higher income households to say they had fair or poor health. After adjusting for age, 30% ( $\pm 1\%$ ) of adults with annual household incomes less than \$25,000 said their health was fair or poor. By contrast, only 6% ( $\pm 1\%$ ) of adults in households with annual incomes of \$75,000 or more said their health was fair or poor.

**Education.** Education also strongly predicted self-reported health status, after accounting for age, income, race and ethnicity. Based on 2008–2010 BRFSS data combined, Washington adults with a high school education or less were more likely to report fair or poor health (21%  $\pm 1\%$ ) compared to those with some college (13%  $\pm 1\%$ ) or a college degree (7%  $\pm < 1\%$ ), after adjusting for age.

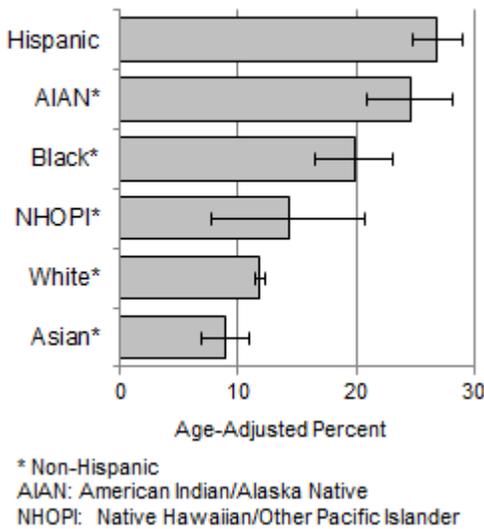
**Self-Reported Fair or Poor Health  
Annual Household Income  
and Education  
Washington BRFSS, 2008–2010**



**Race and Hispanic Origin**

Self-reported health status varied by race and ethnicity, after adjusting for age. The Washington BRFSS 2008–2010 data revealed that reporting fair or poor health was more likely among Hispanic (27% ±2%), American Indian/Alaska Native (25% ±4%) and black (20% ±3%) adults than it was among white (12% ±1%) or Asian (9% ±2%) adults. Fewer Asian adults reported fair or poor health when compared to adults in all other racial and ethnic groupings.

**Self-Reported Fair or Poor Health  
Race and Hispanic Origin  
Washington BRFSS, 2008–2010**



**High-Risk Populations**

Self-reported fair or poor health was more likely among Washington adults who also reported unhealthy behaviors, certain chronic conditions or disability. Washington State BRFSS data for 2008–2010 combined and adjusted for age showed that smokers were twice as likely to say their health was fair or poor (23% ±1%) compared to nonsmokers (11% ±1%). Adults were more likely to report fair or poor health if they were overweight or obese (15% ±1%) compared to those who were not (9% ±1%). The data showed that 40% (±4%) of adults with diabetes and 26% (±2%) of adults with asthma said their health was fair or poor. Among people reporting some disability, 32% (±1%) said their health was fair or poor.

**Other Measures of Impact and Burden**

In addition to reporting health status, adults answering the BRFSS survey also report how many of the past 30 days their physical or mental health was “not good.” When combined, this yields the *summary index of unhealthy days*, defined as the sum of mentally unhealthy days and physically unhealthy days, with a maximum of 30 days. Public health policy makers, researchers and practitioners consider this to be a valid measure of individuals’ perceived health over time and use it to identify groups with perceived unmet health needs.<sup>7</sup>

For 2008–2010 combined, Washingtonians reported an average of six (±1) unhealthy days, similar to the 2009 national average.<sup>8</sup> Adults from lower income households (\$25,000 or less per year) had on average 10 (±1) unhealthy days. By contrast, adults from higher income households (\$75,000 or more) averaged four (±1) unhealthy days.

Older adults had more physically unhealthy days than younger adults. Conversely, younger adults had more mentally unhealthy days. Adults age 65 or older had the lowest average number of mentally unhealthy days. These patterns are mirrored at the national level.<sup>9</sup>

Frequent mental distress is defined as 14 or more of the past 30 days when mental health was not good.<sup>7</sup> BRFSS data for 2008–2010 combined showed that 10% (±1%) of adults in Washington reported frequent mental distress. A large percentage of those from lower income households reported frequent mental distress (19% ±1%), as did adults who also reported a physical limitation or disability (21% ±1%). American Indian/Alaska Native (19% ±4%) and black (14% ±3%) adults in Washington reported higher rates of frequent mental distress

compared to white (10%  $\pm$ 1%) or Asian (5%  $\pm$ 2%) adults. Other groups with high rates of frequent mental distress included those with a high school education or less (14%  $\pm$ 1%) and adults who said they had no health insurance (15%  $\pm$ 2%).

## **Intervention Strategies**

People living with chronic diseases or disability are more likely to report that their health is fair or poor compared to people with no chronic disease or disability. Sustained evidence-based chronic disease prevention programs should lead to long-term gains in Washingtonians' self-reported health. These interventions include evidence-based programs to prevent smoking and increase quit rates, increase physical activity and support healthy eating. Widespread efforts to control existing chronic disease would also likely result in improved self-reported health status, fewer unhealthy days and better quality of life. For example, evidence-based programs that promote effective self-management of chronic conditions such as arthritis, diabetes and asthma have been shown to have positive effects on quality of life measures, including self-reported health status.<sup>10,11,12</sup>

Improvements in social, economic and environmental conditions positively influence health and thus also can improve self-reported health status.

**See Related Chapters:** [Socioeconomic Position in Washington](#), and chapters in the sections on [Chronic Disease](#) and [Major Risk and Protective Factors](#).

**Data Sources** (For additional detail see [Appendix B](#))

Washington State Behavioral Risk Factor Surveillance System (BRFSS) Data: 1987–2010. Washington State Department of Health. Olympia, WA. The data for 2008–2010 were weighted to reflect the county population estimates from the Washington State Office of Financial Management (OFM) for 2008–2010.

United States Behavioral Risk Factor Surveillance System Data: 1994–2010. Centers for Disease Control and Prevention (CDC). *Behavioral Risk Factor Surveillance System Survey Data*. Atlanta, Georgia: U.S. Department of Health and Human Services.

### **For More Information**

U.S. Centers for Disease Control and Prevention, Behavioral Surveillance Branch:  
<http://www.cdc.gov/BRFSS>.

Perruccio AV, Katz JN, Losina E. Health burden in chronic disease: multimorbidity is associated with self-rated health more than medical comorbidity alone. *J Clin Epidemiol*. 2011. In press; available on line August 10, 2011.

Washington State Department of Health, Center for Health Statistics, (360) 236-4321,  
<http://www.doh.wa.gov/DataandStatisticalReports/HealthBehaviors/BehavioralRiskFactorSurveillanceSystemBRFSS.aspx>.

### **Technical Notes**

Self-reported health status has been collected in all 50 states and the District of Columbia since 1994. Self-reported health status and other quality of life measures have been shown to have good construct validity, acceptable correlation with related measures, and good respondent acceptability ratings.<sup>7</sup>

Consistent with *Healthy People 2020*, groupings for age-adjustment are 18–44, 45–54, 55–64, 65–74, and 75 and older. Weighting was developed using the method described National Center for Health Statistics *Statistical Notes 20 January 2001*.

### **Acknowledgments**

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### **Endnotes**

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<sup>2</sup> Miilunpalo S, Vuori I, Oja P, Pasanen M, Urponen H. Self-rated health status as a health measure: The predictive value of self-reported health status on the use of physician services and on mortality in the working-age population. *J Clin Epidemiol*. 1997;50(5):517-528.

<sup>3</sup> Jamoom EW, Horner-Johnson W, Suzuki R, Andresen EM, Campbell VA, RRTC Expert Panel on Health Status Measurement. Age at disability onset and self-reported health status. *BMC Public Health*. 2008;8:1-7. Web site: <http://www.boimedcentral.com>.

<sup>4</sup> Idler EL, Kasl SV. Self-ratings of health: do they also predict change in functional ability? *J Gerontol B Psychol Sci Soc Sci*. 1995;50B(6):S344-S353.

<sup>5</sup> Gold M, Franks P, Erickson P. Assessing the health of the nation. The predictive validity of a preference-based measure and self-rated health. *Med Care*. 1996;34(2):163-177.

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<sup>6</sup> About Healthy People Foundation Health Measures page. HealthyPeople.gov Web site. <http://www.healthypeople.gov/2020/about/tracking.aspx>. Accessed October 10, 2011.

<sup>7</sup> *Measuring Healthy Days*. Atlanta, GA: Centers for Disease Control and Prevention; 2000:8-9,12,15-18.

<sup>8</sup> HRQOL Surveillance and Data, Key Findings pages. Centers for Disease Control and Prevention Web site. [http://www.cdc.gov/hrqol/key\\_findings.htm](http://www.cdc.gov/hrqol/key_findings.htm). Accessed November 8, 2011.

<sup>9</sup> HRQOL Surveillance and Data, HRQOL Tables and Maps pages. Centers for Disease Control and Prevention Web site. <http://www.cdc.gov/hrqol/data.htm>. Accessed November 8, 2011.

<sup>10</sup> Cochran J, Conn VS. Meta-analysis of Quality of Life outcomes following diabetes self-management training. *Diabetes Educ*. 2008;34(5):815-828.

<sup>11</sup> Lorig KR, Sobel DS, Stewart AL, et al. Evidence suggesting that a chronic disease self-management program can improve health status while reducing hospitalization: a randomized trial. *Med Care*. 1999;37(1):5-14.

<sup>12</sup> Larson A, Ward J, Ross L, Whyatt D, Weatherston M, Landau L. Impact of structured education and self management on rural asthma outcomes. *Aust Fam Physician*. 2010;39(3):141-144.