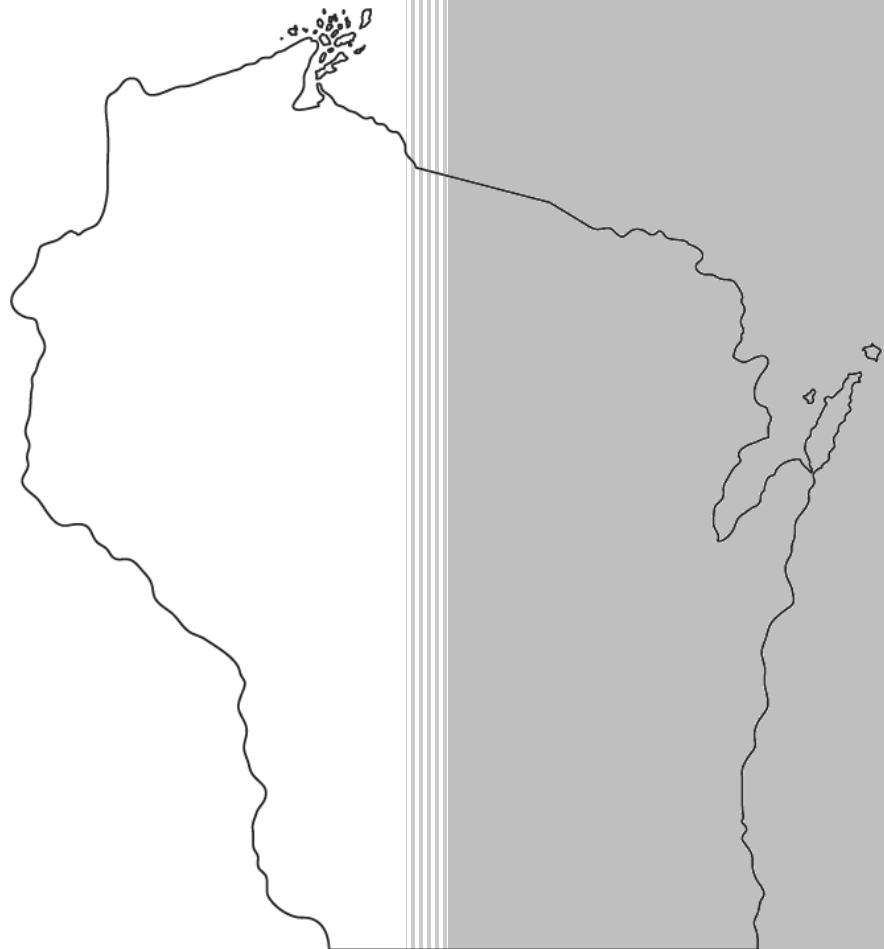


Wisconsin

2019

March

# Tobacco Facts: Consumption, Mortality, and Morbidity



Center for Urban  
Population Health

*Working together to improve the health of communities*



Center for Urban Population Health  
University of Wisconsin-Milwaukee

## ACKNOWLEDGEMENTS

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## SECTION A. CIGARETTE CONSUMPTION AND PRICES

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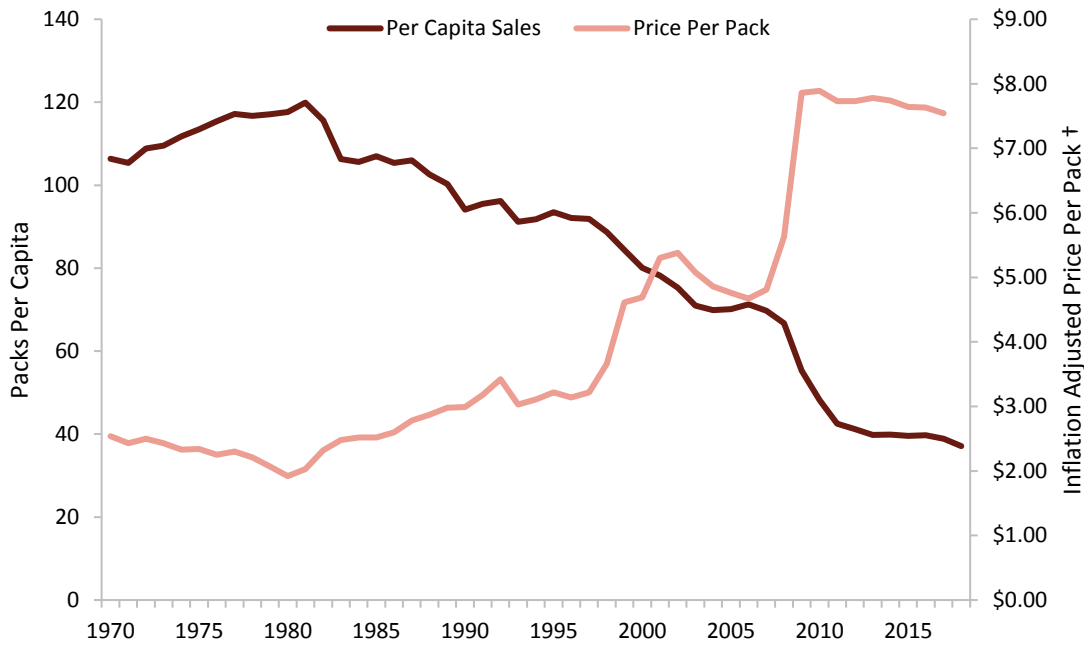
**Table A.1. Number of Cigarette Sales, Statewide and Per Capita, Wisconsin, 1990-2018**

<b>Year *</b>	<b>State Tax-Paid Cigarette Sales</b>	<b>Annual Per Capita Cigarette Sales</b>
1990	463.1 million packs	94.1 packs
2000	426.5 million packs	80.1 packs
2005	388.4 million packs	70.1 packs
2010	285.6 million packs	48.2 packs
2011	241.7 million packs	42.5 packs
2012	234.9 million packs	41.2 packs
2013	227.4 million packs	39.8 packs
2014	228.9 million packs	39.9 packs
2015	227.6 million packs	39.5 packs
2016	229.1 million packs	39.7 packs
2017	225.5 million packs	38.9 packs
2018	215.5 million packs	37.1 packs

\* Calculated using fiscal years (July 01 – June 30)

**Data Sources:** Wisconsin Department of Revenue; The Tax Burden on Tobacco; U.S. Census Bureau, Population Division

**Figure A.1. Per Capita Cigarette Sales and Cigarette Price, Wisconsin, 1970-2018\***



\* The most recent year for which per capita cigarette sales data can be calculated is 2018; the most recent year for which price per pack data are available is 2017.

† Price per pack data are inflation-adjusted to June 2017 dollars.

**Data Sources:** Wisconsin Department of Revenue; The Tax Burden on Tobacco; U.S. Census Bureau, Population Division; U.S. Department of Labor, Bureau of Labor Statistics, CPI Inflation Calculator



**Table A.2. Cigarette Tax Increases, Wisconsin, 1939-2018**

<b>Date</b>	<b>Amount Per Pack</b>
1939	From \$0.00 to \$0.03
July 1, 1955	From \$0.03 to \$0.04
July 1, 1957	From \$0.04 to \$0.05
September 1, 1961	From \$0.05 to \$0.06
August 15, 1963	From \$0.06 to \$0.08
August 1, 1965	From \$0.08 to \$0.10
September 1, 1969	From \$0.10 to \$0.14
November 5, 1971	From \$0.14 to \$0.16
August 1, 1981	From \$0.16 to \$0.20
May 1, 1982	From \$0.20 to \$0.25
September 1, 1987	From \$0.25 to \$0.30
May 1, 1992	From \$0.30 to \$0.38
September 1, 1995	From \$0.38 to \$0.44
November 1, 1997	From \$0.44 to \$0.59
October 1, 2001	From \$0.59 to \$0.77
January 1, 2008	From \$0.77 to \$1.77
September 1, 2009	From \$1.77 to \$2.52

**Data Sources:** Wisconsin Department of Revenue; The Tax Burden on Tobacco, 2014

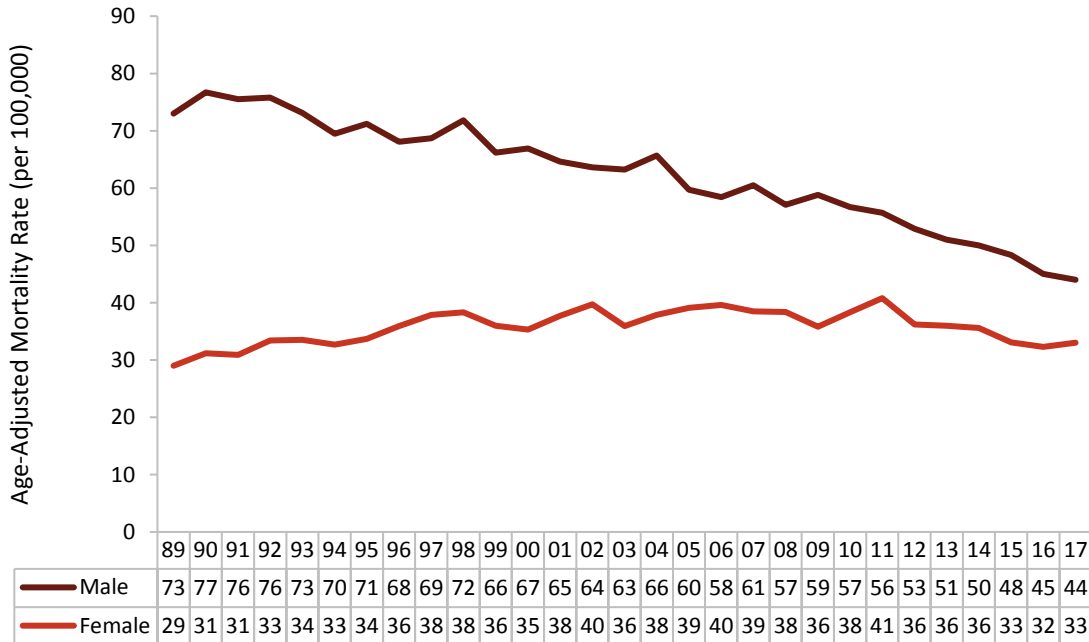
## SECTION B. TOBACCO-RELATED DEATHS AND ECONOMIC COST

- ❖ The use of tobacco is the leading preventable cause of death in Wisconsin.
- ❖ Approximately 7,000 Wisconsin residents die annually from smoking-related illnesses.
- ❖ The direct health care cost of smoking (e.g., physician visits, hospitalizations, medication, etc.) is estimated at \$3.0 billion annually in Wisconsin, with an additional cost of \$1.6 billion in lost productivity.
- ❖ Two thousand seven hundred ninety-one (2,791) Wisconsinites, age 35 years or older, died from lung cancer in 2017.
  - An estimated 79% of these lung cancer deaths (n=2,205) are associated with smoking.

**Source:** Palmersheim KA, Prosser EC. *Burden of Tobacco in Wisconsin: 2015 Edition*. Milwaukee, WI: University of Wisconsin-Milwaukee, Center for Urban Initiatives and Research; 2015.

**Data:** 2017 lung cancer mortality data are from Wisconsin Interactive Statistics on Health.

**Figure B.1. Age-Adjusted Lung Cancer Mortality\* Rate, by Sex, Wisconsin, 1989-2017**

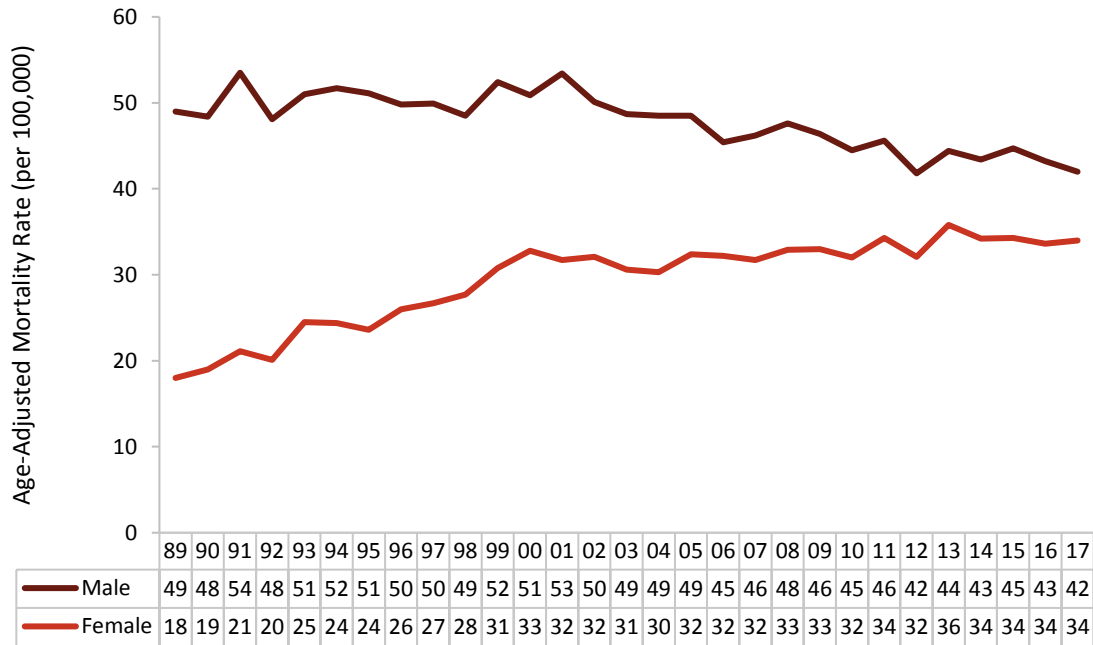


\* Lung cancer mortality is estimated using data for malignant neoplasm of the trachea, bronchus, and lung.

**Data:** Wisconsin Interactive Statistics on Health

**Note:** Age-adjustment is a process by which the age composition is defined as constant so that differences in age composition can be eliminated from the analysis. This is needed because older populations have higher mortality rates, merely because death rates increase with age. Age-adjusted rates allow for more meaningful comparison of the risk of mortality over time and among groups.

**Figure B.2. Age-Adjusted Chronic Obstructive Pulmonary Disease (COPD) Mortality\* Rate, by Sex, Wisconsin, 1989-2017**



\* COPD mortality is estimated using data for bronchitis (chronic and unspecified), emphysema, and other chronic lower respiratory diseases.

**Data:** Wisconsin Interactive Statistics on Health

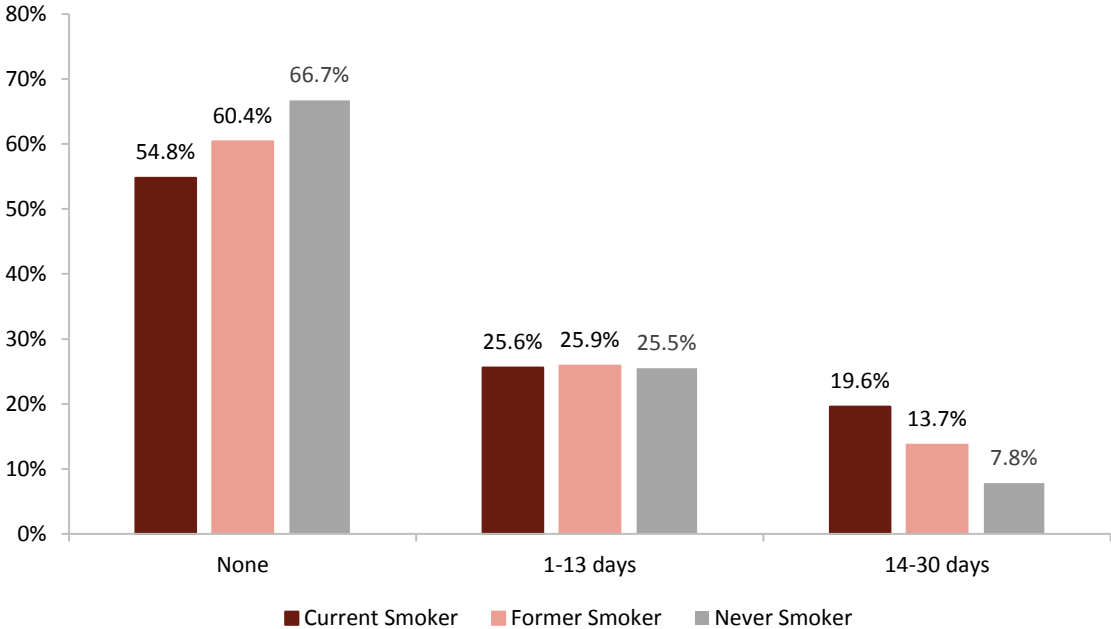
**Note:** Age-adjustment is a process by which the age composition is defined as constant so that differences in age composition can be eliminated from the analysis. This is needed because older populations have higher mortality rates, merely because death rates increase with age. Age-adjusted rates allow for more meaningful comparison of the risk of mortality over time and among groups.





# SECTION C. PHYSICAL HEALTH AND SMOKING

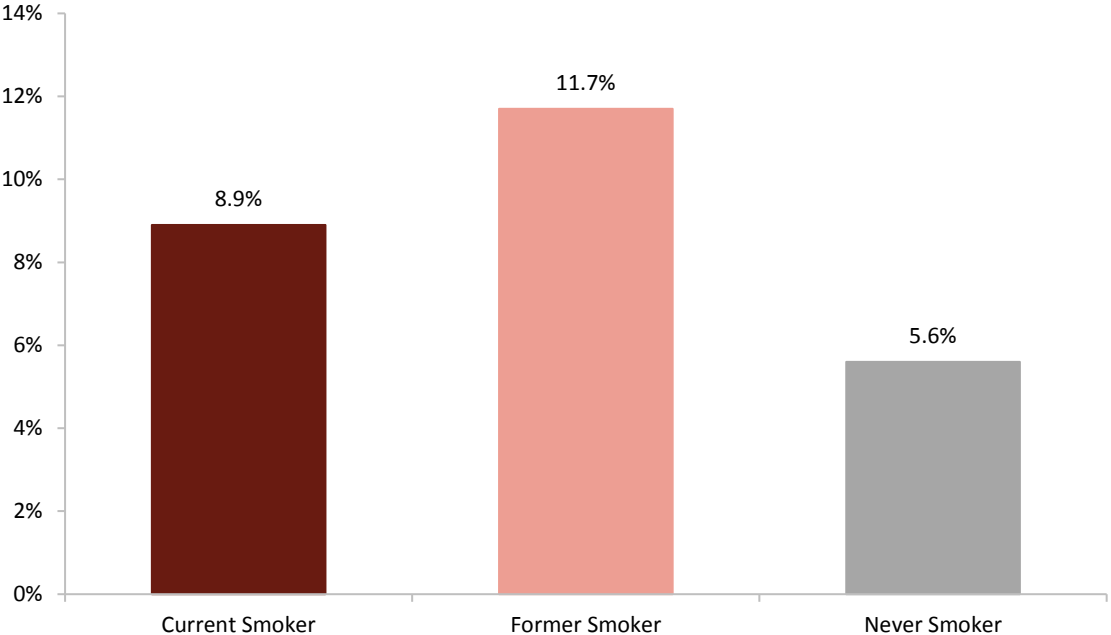
**Figure C.1. Number of Poor Physical Health Days\* During the Past 30 Days, by Current Cigarette Smoking Status, Adults, Wisconsin, 2013-2017**



\* The number of poor physical health days was assessed with the following question: Now thinking about your physical health, which includes illness and injury, for how many days during the past 30 days was your physical health not good?

**Data:** Wisconsin Behavioral Risk Factor Survey

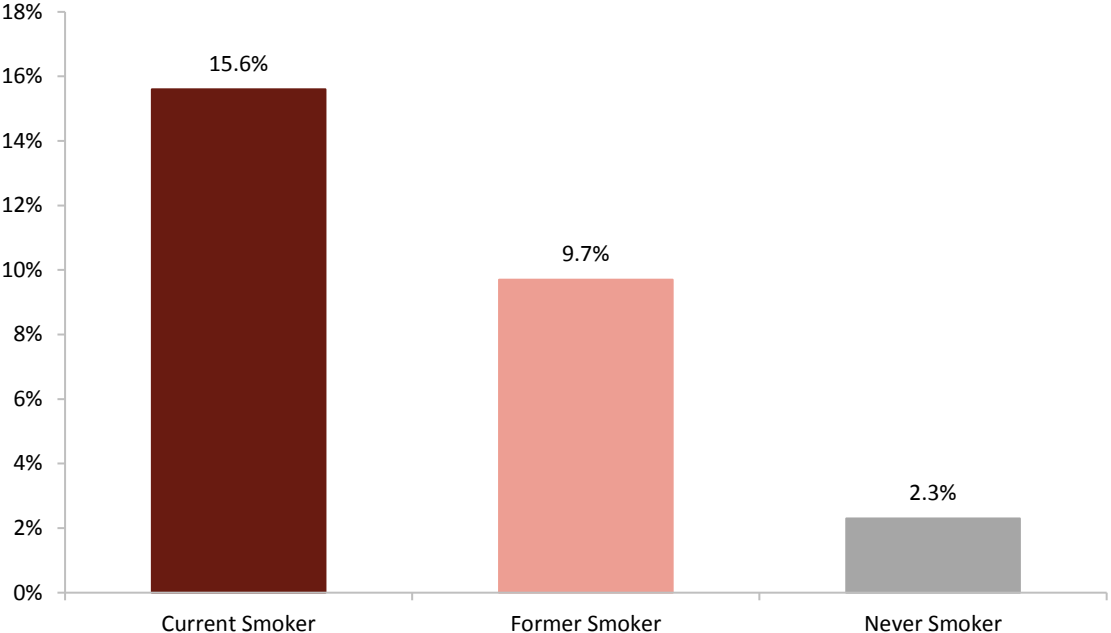
**Figure C.2. Ever Diagnosed with Coronary Heart Disease or Myocardial Infarction\* by Current Cigarette Smoking Status, Adults (age 35 years and older), Wisconsin, 2013-2017**



\* Ever diagnosed with coronary heart disease/myocardial infarction was assessed with the following 2 questions: Has a doctor, nurse, or other health professional ever told you that you had angina or coronary heart disease? Has a doctor, nurse, or other health professional ever told you that you had a heart attack also called a myocardial infarction?

**Data:** Wisconsin Behavioral Risk Factor Survey

**Figure C.3. Ever Diagnosed with Chronic Obstructive Pulmonary Disease (COPD)\* by Current Cigarette Smoking Status, Adults (age 35 years and older), Wisconsin, 2013-2017**

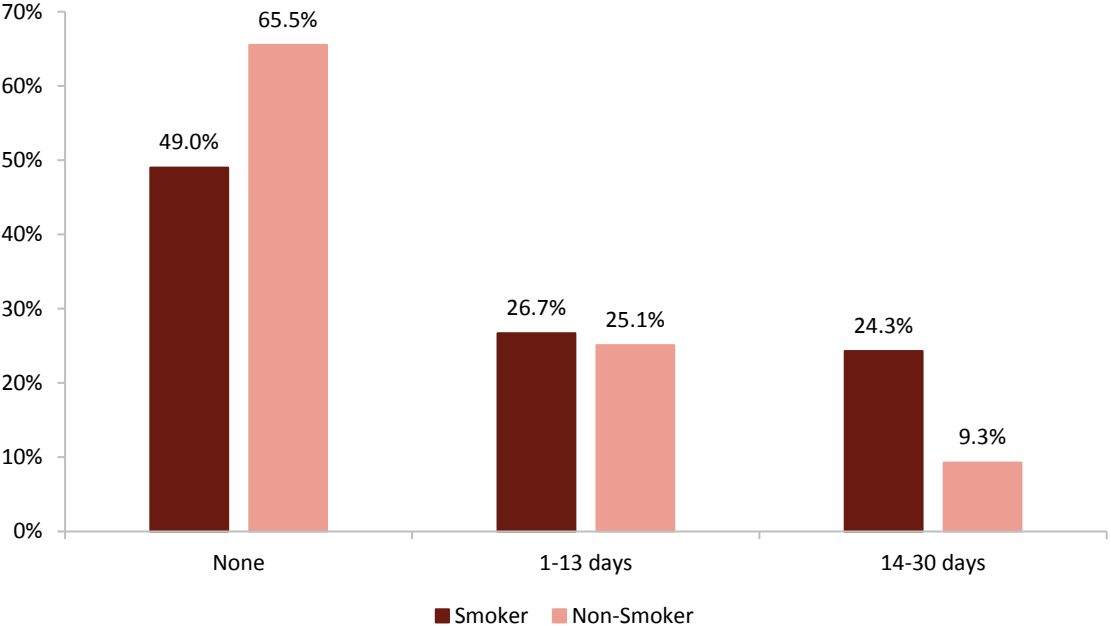


\* Ever diagnosed with chronic obstructive pulmonary disease (COPD) was assessed with the following question:  
Has a doctor, nurse, or other health professional ever told you that you have chronic obstructive pulmonary disease, COPD, emphysema or chronic bronchitis?

**Data:** Wisconsin Behavioral Risk Factor Survey

# SECTION D. MENTAL HEALTH, ADVERSE EVENTS, AND SMOKING

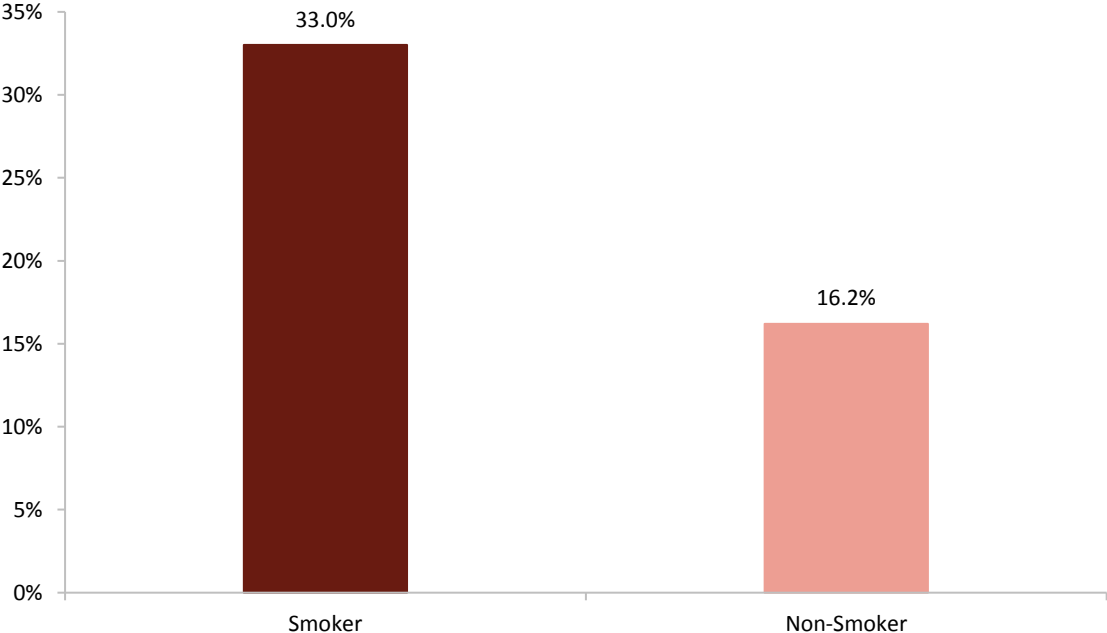
**Figure D.1. Number of Poor Mental Health Days\* During the Past 30 Days, by Current Cigarette Smoking Status, Adults, Wisconsin, 2017**



\* The number of poor mental health days was assessed with the following question: Now thinking about your mental health, which includes stress, depression, and problems with emotions, for how many days during the past 30 days was your mental health not good?

**Data:** Wisconsin Behavioral Risk Factor Survey

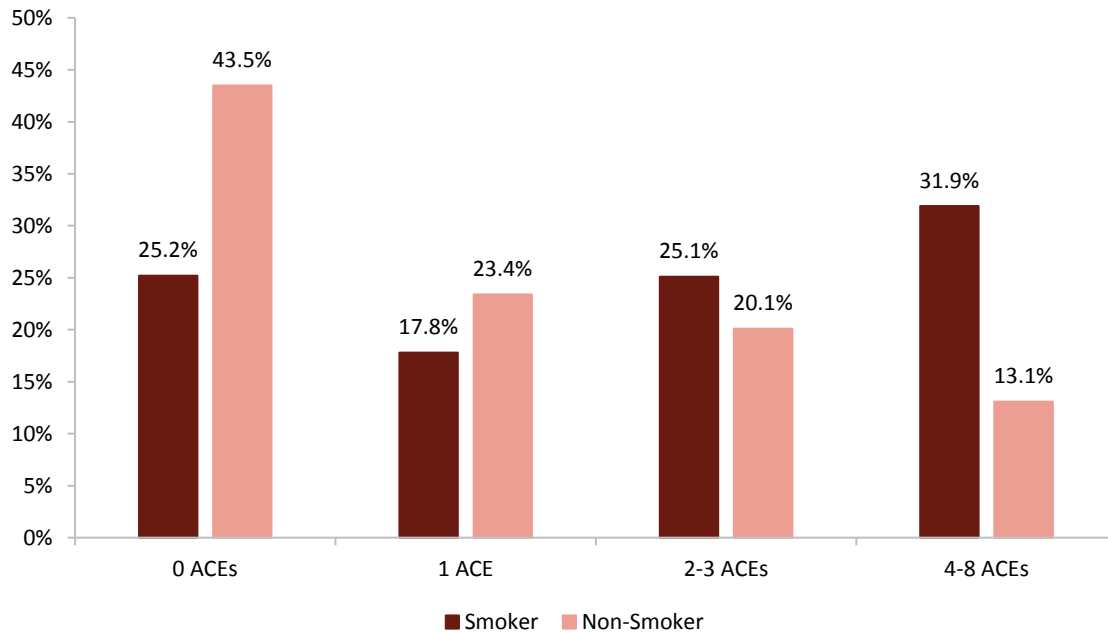
**Figure D.2. Ever Diagnosed with Depression\*, by Current Cigarette Smoking Status, Adults, Wisconsin, 2017**



\* Ever diagnosed with depression was assessed with the following question: Has a doctor, nurse, or other health professional ever told you that you have a depressive disorder, including depression, major depression, dysthymia, or minor depression?

**Data:** Wisconsin Behavioral Risk Factor Survey

**Figure D.3. Number of Adverse Childhood Events (ACEs)\*, by Current Cigarette Smoking Status, Adults, Wisconsin, 2017**



\* The number of adverse childhood events (ACEs) was assessed by constructing an index (scores ranging from 0 to 8) from a series of 11 questions, which referred to the time period before the survey respondent was 18 years of age: Now looking back, before you were 18 years of age... (1) Did you live with anyone who was depressed, mentally ill or suicidal? (2) Did you live with anyone who was a problem drinker or alcoholic? (3) Did you live with anyone who used illegal street drugs or who abused prescription medications? (4) Did you live with anyone who served time or was sentenced to serve time in a prison, jail or other correctional facility? (5) Were your parents separated or divorced? (6) How often did your parents or adults in your home ever slap, hit, kick, punch or beat each other up? (7) How often did a parent or other adult in your home ever hit, beat, kick, or physically hurt you in any way? Do not include spanking. (8) How often did a parent or adult in your home ever swear at you, insult you or put you down? (9) How often did anyone at least 5 years older than you, or an adult, touch you sexually? (10) How often did anyone at least 5 years older than you, or an adult, try to make you touch them sexually? (11) How often did anyone at least 5 years older than you, or an adult, force you to have sex?

**Data:** Wisconsin Behavioral Risk Factor Survey

## SECTION E. DATA SOURCES

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Behavioral Risk Factor Surveillance System. U.S. adult smoking data are from the national Behavioral Risk Factor Surveillance System (BRFSS). The system is overseen by the U.S. Department of Health and Human Services, Centers for Disease Control and Prevention. Available from: <https://www.cdc.gov/brfss/>.

Burden of Tobacco in Wisconsin. Tobacco-related deaths, economic cost, and lost productivity data are from the following source: Palmersheim KA, Prosser EC. *Burden of Tobacco in Wisconsin: 2015 Edition*. Milwaukee, WI: University of Wisconsin-Milwaukee, Center for Urban Initiatives and Research; 2015. Available from: <http://uwm.edu/cuir/wp-content/uploads/sites/111/2015/04/Burden-of-Tobacco-2015.pdf>.

### The Tax Burden on Tobacco.

Historical tax data are from: Orzechowski and Walker. *The Tax Burden on Tobacco: Historical Compilation, Historical Compilation, 2014*. Volume 49. Arlington, VA: Orzechowski and Walker; 2015.

Average annual price per pack data and per capita cigarette sales data for 1970 through 2014 are from: Orzechowski and Walker. *The Tax Burden on Tobacco: Historical Compilation, Historical Compilation, 2014*. Volume 49. Arlington, VA: Orzechowski and Walker; 2015.

Average annual price per pack data and per capita cigarettes sales data for 2015 are from: Orzechowski and Walker. *The Tax Burden on Tobacco: Historical Compilation, 2015*. Volume 50. Arlington, VA: Orzechowski and Walker; 2016.

Average annual price per pack data for 2016 through 2018 and per capita cigarettes sales data for 2016 are from the Centers for Disease Control and Prevention's online repository of Orzechowski and Walker's, *The Tax Burden on Tobacco*, available from <https://data.cdc.gov/Policy/The-Tax-Burden-on-Tobacco-1970-2017/7nwe-3aj9/data>.

U.S. Census Bureau, Population Division. The Wisconsin population estimates used to calculate the 2017 and 2018 per capita sales data are from the American Fact Finder; this is in accordance with how the figures were calculated by Orzechowski and Walker for *The Tax Burden on Tobacco*.

U.S. Department of Labor, Bureau of Labor Statistics, CPI Inflation Calculator. Price per pack of cigarettes is inflation-adjusted to June 2017 dollars using the calculator available from: <https://data.bls.gov/cgi-bin/cpicalc.pl>. Data retrieved on March 7, 2019.

Wisconsin Behavioral Risk Factor Survey. Wisconsin adult tobacco-related data are from the Wisconsin Behavioral Risk Factor Survey (BRFS). The survey is conducted by the Wisconsin Department of Health Services, Division of Public Health, Office of Health Informatics.

Wisconsin Department of Revenue. The state tax-paid cigarette sales data are from the Wisconsin Department of Revenue (DOR). Data for earlier years were received directly from the DOR. More recently collected data are from the DOR's *Monthly Cigarette and Other Tobacco Products Report*. Available from: <https://www.revenue.wi.gov/DORReports/Cigarette-and-Other-Tobacco-Product-Collections.pdf>.



Wisconsin Interactive Statistics on Health. Wisconsin population estimates and mortality data are from Wisconsin Interactive Statistics on Health (WISH), which employs multiple sources from protected databases. WISH is developed and maintained by the Wisconsin Department of Health Services, Division of Public Health, Office of Health Informatics. Available from: <https://www.dhs.wisconsin.gov/wish/>.