Health Risk Behaviors of Kansans

2018 Kansas Behavioral Risk Factor Surveillance System

September 2020

Kansas Department of Health and Environment

Health Risk Behaviors of Kansans 2018

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BRFSS Overview

The Behavioral Risk Factor Surveillance System (BRFSS) is a random digit dial telephone survey of non-institutionalized adults ages 18 years and older living in private residences and college housings with landline and/or cell phone service. If applicable, adult respondents also provide limited data on a randomly selected child in the household via a surrogate interview. BRFSS is coordinated and partially funded by the Centers for Disease Control and Prevention and is the largest continuously conducted telephone survey of population health risk in the world. It is conducted in every state, the District of Columbia and several U.S. territories. The first BRFSS survey in Kansas was conducted as a point-in-time survey in 1990. Kansas has conducted BRFSS survey annually since 1992.

The overall goal of BRFSS is to conduct population-based health risk surveys via telephone in Kansas to provide data that are used for the following:

- Monitoring the leading contributors to morbidity and premature death
- Tracking health status and assessing trends
- Measuring public knowledge, attitudes and opinions
- Program planning
    - Needs assessments
    - Development of goals and objectives
    - Identification of target groups
- Policy development
- Evaluation of public health programs

Data from BRFSS are weighted. This is an analytical procedure designed to account for the complex sample design and non-response bias. It also ensures the resulting estimates will be representative of the underlying population as a whole, as well as for target subpopulations.

Changes in BRFSS survey methodology

In recent years, the proportion of U.S. households with only cellular telephone (cell phone) service has risen steadily. In the first half of 2003 cell phone only service was only 3 percent, but this increased to more than 3 out of every 10 American households (31.6%) during the first half of 2011. In the second half of 2012, nearly 2 out of 5 American households (38.2%) had cellular telephone only service. The demographic characteristics of adults living in cell phone service only households are different. These adults are more likely to be young, males, Hispanics, non-Hispanic African-Americans, living alone or with unrelated adults, living in poverty or near poverty, and renting a home. These changes in phone use impacted traditional random digit dialing landline phone surveys such as BRFSS.

To maintain representativeness, coverage and validity of data, changes in BRFSS survey methodology were made beginning in 2011 by the CDC. These changes include:

1. Use of the dual frame sampling method (landline and cell phone samples) instead of the single frame method (landline phone sample). The sample includes:
    - Adults ages 18 years and older living in a private residences and college housings with landline phone service

Due to changes in BRFSS survey methodology 2011-2017 BRFSS estimates cannot be compared with estimates from previous years. Please refer to Technical Notes for more information about BRFSS survey methodology.

- Adults ages 18 years and older living in a private residences and college housings with cell phone service
- Adults ages 18 years and older living in a private residences and college housings with landline and cell phone service (dual users)

2. Use of the Iterative Proportional Fitting weighting method (raking method) to improve the weighting, adjustment and estimation methods while taking into account the dual frame sampling. The raking method adjusts the survey sample for age, sex, race, ethnicity, education level, marital status, home ownership, region, county and telephone type (landline/cell) to increase the representativeness of survey estimates for the general population.

Impact of Change in Survey Methodology in 2011

Changes in BRFSS methodology starting in 2011 influence the state and national-level prevalence estimates for 2011 and subsequent years. Size and direction of the effect of new methodology on the prevalence estimates varies by health indicators. Changes in the 2011 data are likely to show indications of somewhat higher occurrences of risk behaviors common to younger adults and to certain racial or ethnic minority groups. The absolute increases or decreases in the prevalence estimates of health indicators from 2010 to 2011 BRFSS do not show any real changes in the actual prevalence of diseases, risk factors/behaviors and other health indicators in the general population. These variations in the estimates are caused by the addition of cell phone households to the survey sampling frame and adoption of a new advanced statistical method for weighting of the survey data. The 2011 and later data cannot be compared with data from 2010 and preceding years to examine trends as prevalence estimates cannot be compared and interpreted using data generated from two different methodologies. The 2011 estimates constitute a new baseline for monitoring trends of health indicators.

Analysis, Interpretation and Use of 2018 Kansas BRFSS Data

For analysis, Kansas BRFSS data from 2011-2018 cannot be combined with those from previous years as sampling and weighting methods are different. The weighted data analysis techniques that were used for 2011-2017 surveys was applied for the 2018 survey. The 2018 BRFSS provides prevalence estimates of diseases, risk factors/behaviors and other health indicators for adult Kansans ages 18 years and older. The 2018 BRFSS also provides prevalence estimates of health indicators for various socio-demographic subgroups in Kansas. The prevalence estimates from 2018 Kansas BRFSS are representative of non-institutionalized adults ages 18 years and older living in private residences and college housings with landline and/or cell phone service.

2018 BRFSS data can be reliably used for: examining and monitoring the burden of public health issues in Kansas, planning and evaluation of public health programs to address these issues, public health decision making, leveraging funding opportunities and public education.

For more information about the Kansas BRFSS, including questionnaires and data results for 2018 and previous years, please visit: http://www.kdheks.gov/brfss/index.html.

Executive Summary

Healthy People 2020 (HP 2020) is a comprehensive nationwide set of goals and objectives related to health promotion and disease prevention. In Healthy People 2020, a set of Leading Health Indicators was selected based on their relevance to broad public health topics and availability of data to measure their progress. The indicators serve as a snapshot of the nation's progress toward improving the overall health of the population.

The 12 Leading Health Indicators are:

- Access to Health Services
- Clinical Preventive Services
- Environmental Quality
- Injury and Violence
- Maternal, Infant and Child Health
- Mental Health
- Nutrition, Physical Activity and Obesity
- Oral Health
- Reproductive and Sexual Health
- Social Determinants
- Substance Abuse
- Tobacco

2018 Kansas BRFSS collected data on several Healthy People 2020 topics. This report examines the Kansas data in context with the targets set for several Healthy People 2020 objectives.

Report Highlights

Access to Health Services

- The percentage of Kansas adults ages 18 to 64 years with no health care coverage was significantly **higher** among adults in lower education groups compared with adults in higher education groups.
- The percentage of Kansas adults ages 18 years and older with no personal health care provider was significantly **higher** among males compared with females.

Healthy People 2020 Objectives:

- *Increase the proportion of persons with medical insurance to **100%.** Kansas 2018: **87.0%.** Kansas has **not yet met** the HP 2020 target.*
- *Increase the proportion of persons with a usual primary care provider to **83.9%.** Kansas 2018: **77.7%.** Kansas has **not yet met** the HP 2020 target.*

Injury and Violence

- The percentage of Kansas adults ages 18 years and older who did not always wear a seat belt when they drove or rode in a car was significantly **higher** among younger adults compared with adults in older age groups.

Due to changes in BRFSS survey methodology 2011-2017 BRFSS estimates cannot be compared with estimates from previous years. Please refer to Technical Notes for more information about BRFSS survey methodology.

Healthy People 2020 Objective:

- *Increase use of safety belts to **92.0%.** Kansas 2018: **80.9%.** Kansas has **not yet met** the HP 2020 target.*

- The percentage of Kansas adults ages 45 years and older who had at least one fall related injury during the preceding 12 months was significantly **higher** among adults living with a disability compared with adults living without a disability.

Clinical Preventive Services

- Kansas has not yet met the HP 2020 targets for objectives related to breast, cervical and colorectal cancer screening.
- The percentage of Kansas adults ages 18 years and older who did not get immunized against influenza during the past 12 months was significantly **higher** among adults with no insurance compared with adults with insurance.
- The percentage of Kansas adults ages 65 years and older who never received a pneumonia vaccination was significantly **higher** among adults with no insurance compared with adults with insurance.
- The percentage of Kansas women aged 21 to 65 years who did not did get a Pap smear test within the preceding three years was significantly **higher** among women with lower annual household income compared with women in higher annual household income groups.
- The percentage of Kansas women aged 50 to 74 years who did not receive a mammogram within the preceding two years was significantly **higher** among women who are uninsured compared with women who are insured.
- The percentage of Kansas adults aged 50 to 75 years who were not up-to-date with colorectal screening was significantly **higher** among Hispanics as compared with non-Hispanic whites.

Healthy People 2020 Objectives:

- *Increase the percentage of noninstitutionalized adults ages 18 years and older who are vaccinated annually against seasonal influenza to **70.0%.** Kansas 2018: **36.0%.** Kansas has **not yet met** the HP 2020 target.*
- *Increase the percentage of noninstitutionalized adults ages 65 years and older who are vaccinated against pneumococcal disease to **90.0%.** Kansas 2018: **76.2%.** Kansas has **not yet met** the HP 2020 target.*

Nutrition, Physical Activity and Obesity

- The percentage of Kansas adults ages 18 years and older who were obese was significantly **higher** among adults living with a disability compared with adults living without a disability.
- The percentage of Kansas adults ages 18 years and older who did not participate in leisure-time physical activity in the past 30 days was significantly **higher** among older adults compared with adults in younger age groups.

Healthy People 2020 Objectives:

- *Reduce the proportion of adults who are obese to **30.5%.** Kansas 2018: **34.4%.** Kansas has **not met** the HP 2020 target. In addition there are disparities in population subgroups that have not met the HP 2020 target.*
- *Reduce the proportion of adults who engage in no leisure-time physical activity to **32.6%.** Kansas 2018: **22.5%.** Kansas has **met** the HP 2020 target, but still approximately **1 in 4** Kansas adults did not participate in leisure-time physical activity. In addition there are disparities in population subgroups that have not met the HP 2020 target.*

Tobacco

- The percentage of Kansas adults ages 18 years and older who currently smoke cigarettes was significantly **higher** among adults with lower education compared with adults in higher education groups.
- The percentage of Kansas adults ages 18 years and older who currently use any smokeless tobacco products was significantly **higher** among males compared with females.
- The percentage of Kansas adults ages 18 years and older that currently use e-cigarettes was significantly **higher** among adults ages 34 years and younger compared with adults ages 45 years and older.

Healthy People 2020 Objectives:

- *Reduce cigarette smoking by adults to **12.0%.** Kansas 2018: **17.3%.** Kansas has **not yet met** the HP 2020 target.*
- *Reduce use of smokeless tobacco products to **0.2%.** Kansas 2018: **5.8%**. Kansas has **not yet met** the HP 2020 target.*

Oral Health

- The percentage of Kansas adults ages 18 years and older who did not use the oral health care system in the past 12 months was significantly **higher** among adults with lower annual household income compared with adults in higher annual household income groups.
- The percentage of Kansas adults ages 65 to 74 years who have lost all their permanent teeth was significantly **higher** among adults with lower education compared with adults in higher education groups.

Healthy People 2020 Objective:

- *Reduce the proportion of adults ages 65 to 74 years who have lost all of their natural teeth to **21.6%.** Kansas 2018: **10.9%.** Kansas has **met** the HP 2020 target, but still approximately **1 in 9** Kansas adults have lost all their permanent teeth. In addition there are disparities in population subgroups that have not met the HP 2020 target.*

Substance Abuse

- The percentage of Kansas adults ages 18 years and older who were binge drinkers in the past 30 days was significantly **higher** among males compared with females.

Healthy People 2020 Objectives:

- *Reduce the proportion of adults 18 years and older engaging in binge drinking during the past 30 days to **24.2%.** Kansas 2018: **15.8%.** Kansas has **met** the HP 2020 target, but still approximately **1 in 6** Kansas adults were binge drinkers. In addition there are disparities in population subgroups that have not met the HP 2020 target.*

- The percentage of Kansas adults ages 18 years and older who were drinking and driving in the past 30 days was significantly **higher** among males compared with females.

Mental Health

- Mental health issues are seen in the Kansas population and its subgroups.
- The percentage of Kansas adults ages 18 years and older who were ever diagnosed with depression was significantly **higher** among females compared with males.
- The percentage of Kansas adults ages 18 years and older who were ever diagnosed with depression was significantly **higher** among adults with lower annual household income compared with adults in higher annual household income groups.

Chronic Health Conditions

- The percentage of Kansas adults ages 18 years and older who were ever diagnosed with diabetes was significantly **higher** among adults living with a disability compared with adults living without a disability.
- The percentage of Kansas adults ages 18 years and older who were ever diagnosed with current asthma was significantly **higher** among females compared with males.
- The percentage of Kansas adults ages 18 years and older who were ever diagnosed with arthritis was significantly **higher** among adults with lower annual household income compared with adults in higher annual household income groups.
- The percentage of Kansas adults ages 18 years and older who were ever diagnosed with hypertension was significantly **higher** among older adults compared with younger adults.
- The percentage of Kansas adults ages 18 years and older that had ever been diagnosed with heart disease was significantly **higher** males compared with females.
- The percentage of Kansas adults ages 18 years and older that had ever been diagnosed with stroke was significantly **higher** among adults with lower annual household income compared with adults in higher annual household income groups.
- The percentage of Kansas adults ages 18 years and older who were ever diagnosed with cancer (excluding skin cancer) was significantly **higher** among females compared with males.
- The percentage of Kansas adults ages 18 years and older who were ever diagnosed with skin cancer was significantly **higher** among non-Hispanic whites compared with non-Hispanic other/multi-race adults (age-adjusted prevalence).

Healthy People 2020 Objectives:

- *Reduce the proportion of adults with hypertension to **26.9%**; Kansas 2018: **32.4%.** Kansas has **not yet met** the HP 2020 targets.*

Access to Health Care: Health Insurance

Access to health services is one of the leading health indicators of Healthy People 2020. The U.S. Institute of Medicine defined health access as the timely use of personal health services to achieve the best possible health outcomes. Lack of access to health services is a persistent barrier to good health.[1] Adults with no or limited insurance coverage are less likely to get needed medical attention. [2]

Access to health care among Kansans ages 18 to 64 years:

In 2018, approximately 1 in 6 Kansas adults ages 18 to 64 years lacked health care coverage. The percentage of Kansas adults ages 18 to 64 years with no health care coverage was significantly **higher** among:

- Adults ages 44 years and younger compared with those in older age groups.
- Non-Hispanic African-Americans and Hispanics compared with non-Hispanic whites (age-adjusted prevalence)
- Adults in lower education groups compared with adults in higher education groups
- Adults with an annual household income of less than $25,000 compared with those with an annual household income of $35,000 or higher
- Adults living with a disability compared with those living without a disability

The percentage of Kansas adults with no health care coverage did not differ significantly between males and females.

Percentage of Adults Ages 18 to 64 Years Who Lack Health Care Coverage, KS BRFSS 2018

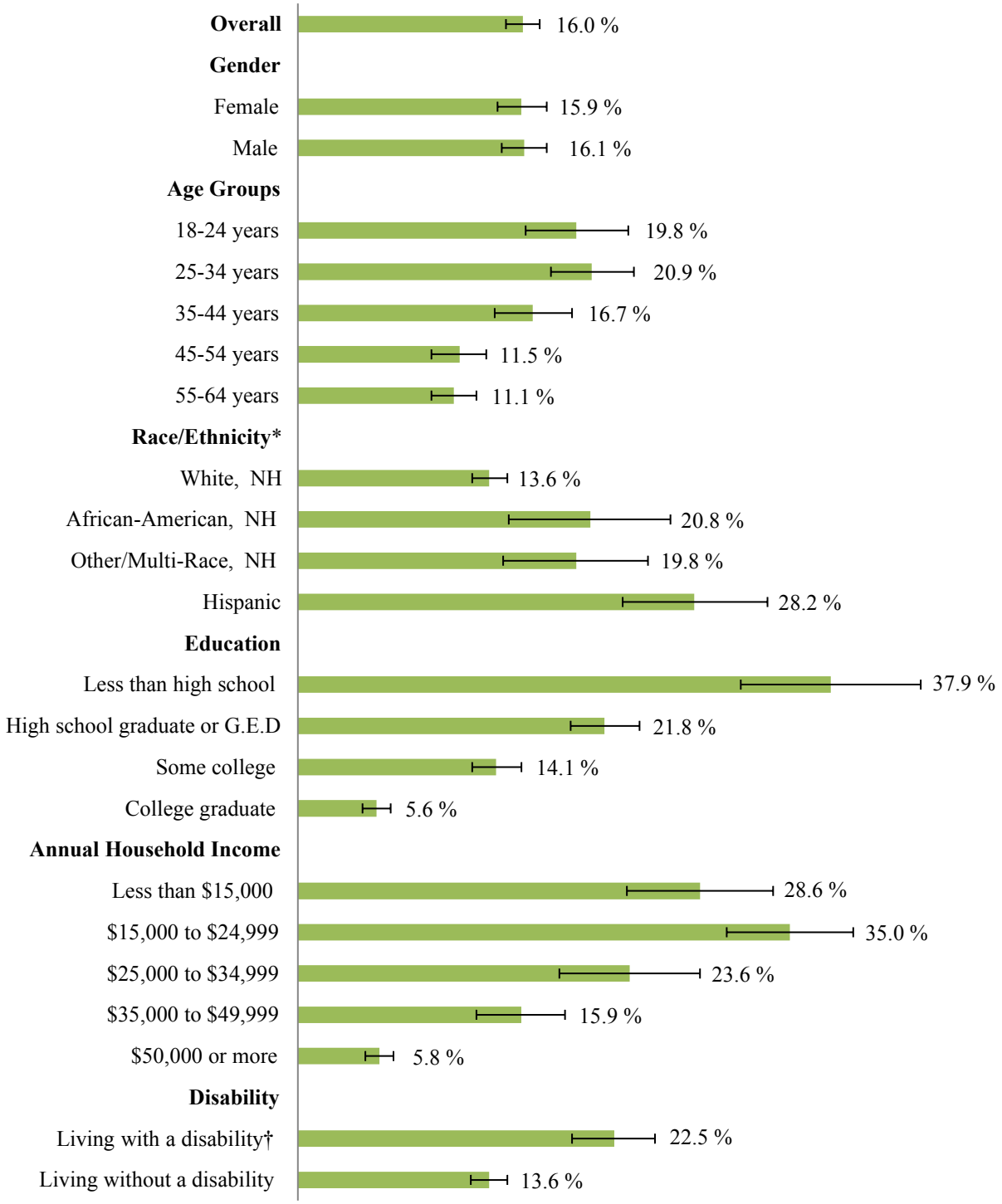
Demographic Characteristics	Weighted Percentage	95% CI
Overall	16.0	14.8-17.2
Gender		
Female	15.9	14.2-17.7
Male	16.1	14.5-17.7
Age Groups		
18-24 years	19.8	16.2-23.5
25-34 years	20.9	18.0-23.9
35-44 years	16.7	14.0-19.5
45-54 years	11.5	9.5-13.4
55-64 years	11.1	9.5-12.7
Race/Ethnicity*		
White, NH	13.6	12.4-14.9
African-American, NH	20.8	15.0-26.5
Other/Multi-Race, NH	19.8	14.6-24.9
Hispanic	28.2	23.1-33.4
Education		
Less than high school	37.9	31.5-44.3
High school graduate or G.E.D	21.8	19.4-24.3
Some college	14.1	12.4-15.9
College graduate	5.6	4.6-6.6
Annual Household Income		
Less than $15,000	28.6	23.4-33.8
$15,000 to $24,999	35.0	30.5-39.5
$25,000 to $34,999	23.6	18.6-28.6
$35,000 to $49,999	15.9	12.7-19.0
$50,000 or more	5.8	4.8-6.8
Disability		
Living with a disability†	22.5	19.5-25.4
Living without a disability	13.6	12.3-14.9

*Prevalence estimates for race and ethnicity were age-adjusted to the U.S. 2000 standard population.

†Living with a disability: Respondents who have at least one of the six disability types (hearing, vision, cognition, mobility,self-care, and/or independent living).

Due to changes in BRFSS survey methodology 2011-2018 BRFSS estimates cannot be compared with estimates from previous years. Please refer to Technical Notes for more information about BRFSS survey methodology.

Percentage of Adults Ages 18 to 64 Years Who Lack Health Care Coverage, KS BRFSS 2018

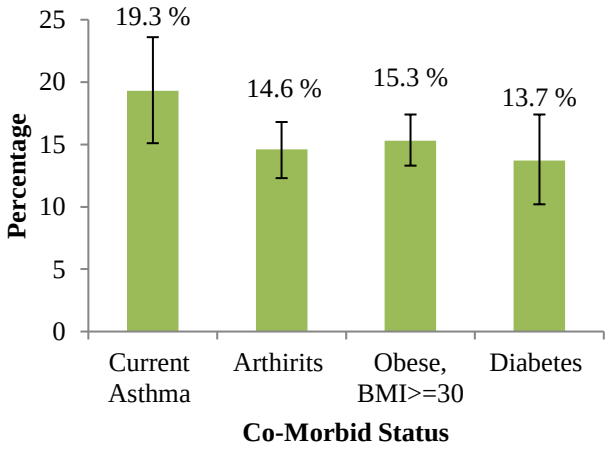


*Prevalence estimates for race and ethnicity were age-adjusted to the U.S. 2000 standard population.
†Living with a disability: Respondents who have at least one of the six disability types (hearing, vision, cognition, mobility, self-care, and/or independent living).

Due to changes in BRFSS survey methodology 2011-2018 BRFSS estimates cannot be compared with estimates from previous years. Please refer to Technical Notes for more information about BRFSS survey methodology.

Percentage of Adults Ages 18 to 64 Years Who Lack Health Care Coverage by Co-Morbid Conditions, KS BRFSS 2018		
Co-Morbid Conditions	Weighted Percentage	95% CI
Current Asthma		
Yes	19.3	15.1-23.6
No	15.4	14.2-16.7
Arthritis		
Yes	14.6	12.3-16.8
No	16.4	15.0-17.7
Weight		
Normal or Underweight, BMI<25	17.1	14.9-19.3
Overweight, 25<= BMI<30	14.1	12.0-16.1
Obese, BMI>=30	15.3	13.3-17.4
Diabetes		
Yes	13.7	10.2-17.2
No	16.2	14.9-17.4

Percentage of Adults Ages 18 to 64 Years Who Lack Health Care Coverage, by Co-Morbid Conditions, KS BRFSS 2018



The percentage of Kansas adults ages 18 to 64 years with no health care coverage did not differ significantly by current asthma status, arthritis status, diabetes status or weight categories.

SUMMARY

Approximately 16 percent of Kansas adults ages 18 to 64 years lacked health care coverage. In addition, higher percentages of adults who lacked health insurance were seen among: adults ages 44 years and younger, non-Hispanic African-Americans, Hispanics, adults with lower income, adults with lower education and adults living with disability.

The Healthy People 2020 target is for 100 percent of people to have health insurance. Further public health efforts are needed to reach the target in Kansas and to address observed disparities among population subgroups.

Due to changes in BRFSS survey methodology 2011-2018 BRFSS estimates cannot be compared with estimates from previous years. Please refer to Technical Notes for more information about BRFSS survey methodology.

Access to health care among Kansans ages 18 years and older:

In 2018, 1 in 8 Kansas adults ages 18 years and older lacked health care coverage. The percentage of Kansas adults ages 18 years and older with no health care coverage was significantly **higher** among:

- Adults ages 44 years and younger compared with those in older age groups
- Non-Hispanic African-Americans, non-Hispanic and Hispanics compared with non-Hispanic whites (age-adjusted prevalence)
- Adults in lower education groups compared with adults in higher education groups
- Adults with an annual household income of less than $25,000 compared with those with an annual household income of $35,000 or higher
- Adults living with a disability compared with those living without a disability

The percentage of Kansas adults with no health care coverage did not differ significantly between males and females.

Percentage of Adults 18 Years and Older Who Lack Health Care Coverage, KS BRFSS 2018

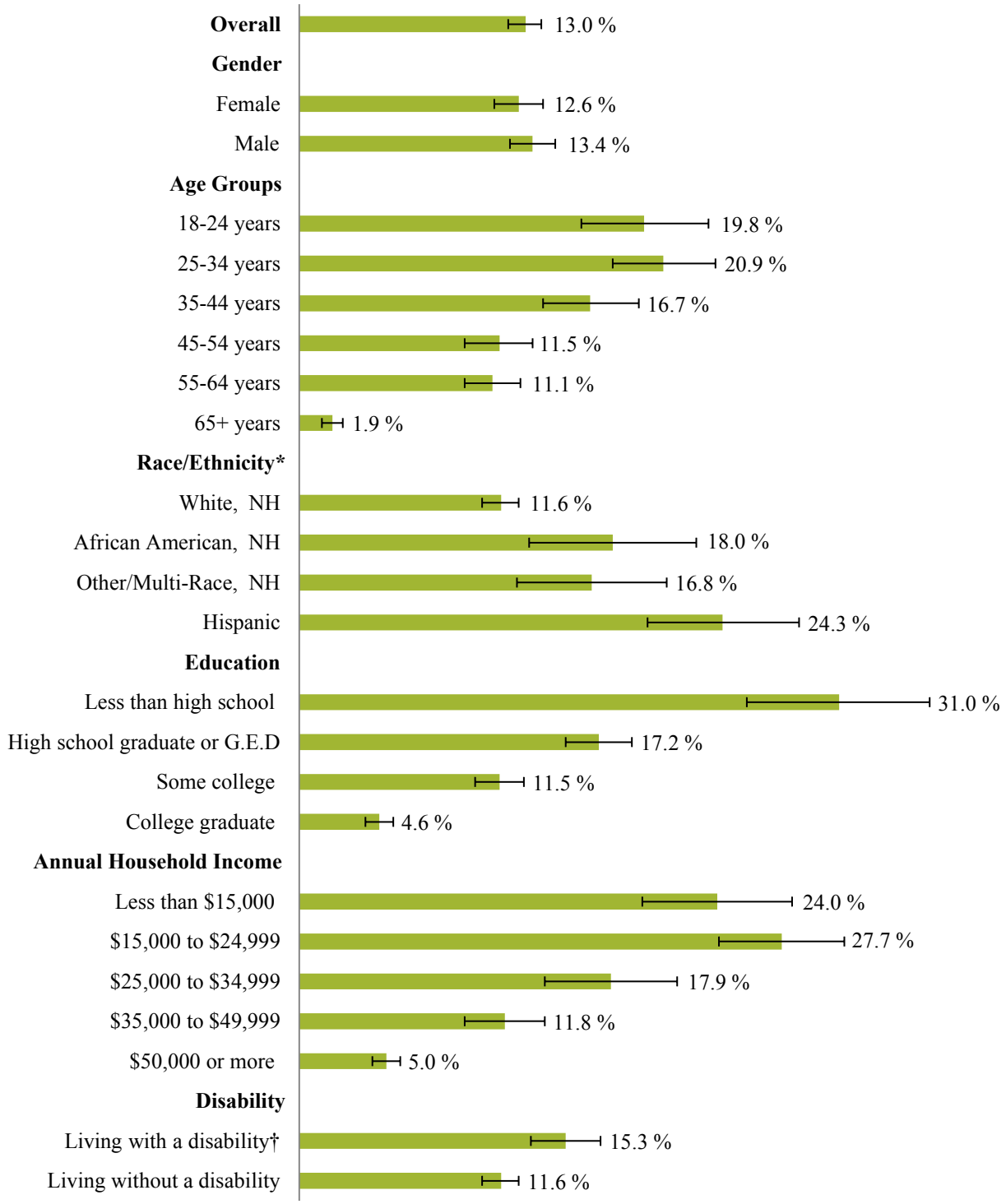
Demographic Charateristics	Weighted Percentage	95% CI
Overall	13.0	12.0-13.9
Gender		
Female	12.6	11.2-14.0
Male	13.4	12.1-14.7
Age Groups		
18-24 years	19.8	16.2-23.5
25-34 years	20.9	18.0-23.9
35-44 years	16.7	14.0-19.5
45-54 years	11.5	9.5-13.4
55-64 years	11.1	9.5-12.7
65+ years	1.9	1.3-2.5
Race/Ethnicity*		
White, NH	11.6	10.5-12.6
African American, NH	18.0	13.2-22.8
Other/Multi-Race, NH	16.8	12.5-21.1
Hispanic	24.3	20.0-28.7
Education		
Less than high school	31.0	25.7-36.2
High school graduate or G.E.D	17.2	15.3-19.1
Some college	11.5	10.1-12.9
College graduate	4.6	3.8-5.4
Annual Household Income		
Less than $15,000	24.0	19.7-28.3
$15,000 to $24,999	27.7	24.1-31.3
$25,000 to $34,999	17.9	14.1-21.7
$35,000 to $49,999	11.8	9.5-14.1
$50,000 or more	5.0	4.2-5.8
Disability		
Living with a disability†	15.3	13.3-17.3
Living without a disability	11.6	10.5-12.6

*Prevalence estimates for race and ethnicity were age-adjusted to the U.S. 2000 standard population.

†Living with a disability: Respondents who have at least one of the six disability types (hearing, vision, cognition, mobility,self-care, and/or independent living).

Due to changes in BRFSS survey methodology 2011-2018 BRFSS estimates cannot be compared with estimates from previous years. Please refer to Technical Notes for more information about BRFSS survey methodology.

Percentage of Adults Ages 18 Years and Older Who Lack Health Care Coverage, KS BRFSS 2018



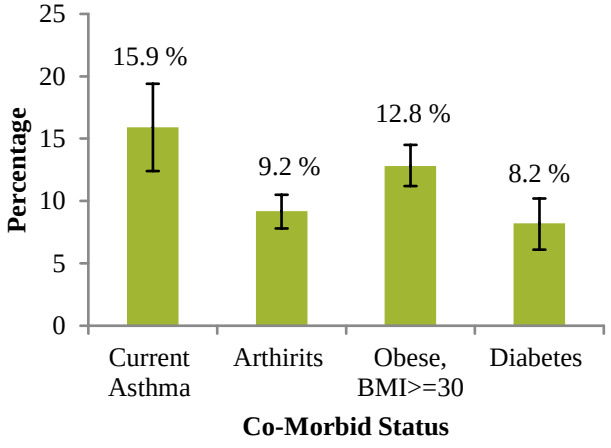
*Prevalence estimates for race and ethnicity were age-adjusted to the U.S. 2000 standard population.
†Living with a disability: Respondents who have at least one of the six disability types (hearing,vision,cognition, mobility, self-care, and/or independent living).

Due to changes in BRFSS survey methodology 2011-2018 BRFSS estimates cannot be compared with estimates from previous years. Please refer to Technical Notes for more information about BRFSS survey methodology.

Percentage of Adults Ages 18 Years and Older Who Lack Health Care Coverage by Co-Morbid Conditions, KS BRFSS 2018

Co-Morbid Conditions	Weighted Percentage	95% CI
Current Asthma		
Yes	15.9	12.4-19.4
No	12.5	11.5-13.5
Arthritis		
Yes	9.2	7.9-10.6
No	14.3	13.1-15.5
Weight		
Normal or Underweight, BMI<25	14.1	12.3-15.9
Overweight, 25<= BMI<30	10.9	9.4-12.5
Obese, BMI>=30	12.8	11.1-14.4
Diabetes		
Yes	8.2	6.2-10.3
No	13.5	12.5-14.6

Percentage of Adults Ages 18 Years and Older Who Lack Health Care Coverage, by Co-Morbid Conditions, KS BRFSS 2018



The percentage of Kansas adults ages 18 years and older with no health care coverage was significantly **higher** among:

- Adults without arthritis compared with those with arthritis
- Adults without diabetes compared with those with diabetes

The percentage of Kansas adults ages 18 years and older with no health care coverage did not differ significantly by current asthma status or weight category.

SUMMARY

Approximately 13 percent of Kansas adults ages 18 years and older lacked health care coverage. Also, significant disparities were seen among age, race/ethnicity, education, annual household income groups and adults living with disability, as well as those without co-morbid conditions (arthritis or diabetes).

The Healthy People 2020 target is for 100 percent of persons to have health insurance. Further public health efforts are needed to reach the target and to address disparities seen in various population subgroups in Kansas.

Due to changes in BRFSS survey methodology 2011-2018 BRFSS estimates cannot be compared with estimates from previous years. Please refer to Technical Notes for more information about BRFSS survey methodology.

Access to Health Care:
No Personal Health Care Provider

Health-related outcomes are shown to be substantially improved when people have access to primary health care and a personal doctor. People who have a personal health care provider also indicate they receive appropriate preventive care, have their problems identified and pay lower costs related to hospitalization due to timely diagnostic tests, fewer prescriptions and fewer emergency room visits.[3]

No personal doctor among Kansans ages 18 years and older:

In 2018, approximately 1 in 5 Kansas adults ages 18 years and older did not have a personal health care provider. The percentage of Kansas adults with no personal health care provider was significantly **higher** among:

- Males compared with females
- Younger adults compared with adults in older age groups
- Non-Hispanic African-Americans, non-Hispanic other/multi-race adults and Hispanics, compared with non-Hispanic whites (age-adjusted prevalence)
- Adults who had less than high school education compared with those with higher levels of education
- Adults with an annual household income less than $50,000 compared with adults with an annual household income greater than $50,000
- Adults living without a disability compared with those living with a disability
- Adults who were uninsured compared to adults who were insured

Percentage of Adults Ages 18 Years and Older With No Personal Doctor, KS BRFSS 2018

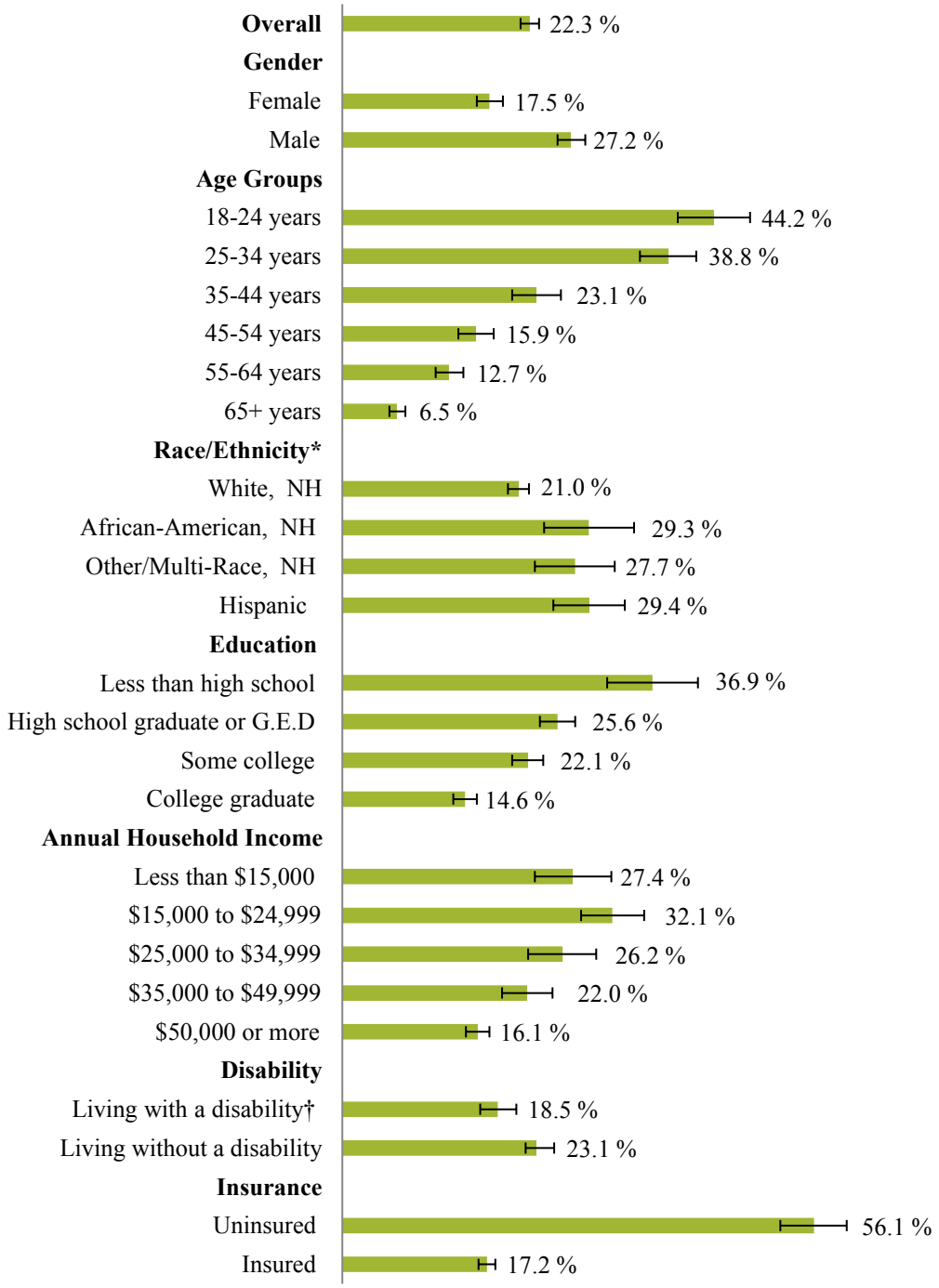
Demographic Characteristics	Weighted Percentage	95% CI
Overall	22.3	21.2-23.4
Gender		
Female	17.5	16.0-19.1
Male	27.2	25.6-28.9
Age Groups		
18-24 years	44.2	39.9-48.5
25-34 years	38.8	35.4-42.1
35-44 years	23.1	20.2-26.0
45-54 years	15.9	13.8-18.0
55-64 years	12.7	11.1-14.4
65+ years	6.5	5.6-7.5
Race/Ethnicity*		
White, NH	21.0	19.7-22.2
African-American, NH	29.3	24.0-34.7
Other/Multi-Race, NH	27.7	22.9-32.4
Hispanic	29.4	25.1-33.6
Education		
Less than high school	36.9	31.5-42.3
High school graduate or GED	25.6	23.5-27.7
Some college	22.1	20.2-23.9
College graduate	14.6	13.2-16.0
Annual Household Income		
Less than $15,000	27.4	22.9-32.0
$15,000 to $24,999	32.1	28.4-35.9
$25,000 to $34,999	26.2	22.1-30.2
$35,000 to $49,999	22.0	19.0-25.0
$50,000 or more	16.1	14.7-17.5
Disability		
Living with a disability†	18.5	16.4-20.7
Living without a disability	23.1	21.8-24.5
Insurance		
Uninsured	56.1	52.1-60.0
Insured	17.2	16.2-18.2

*Prevalence estimates for race and ethnicity were age-adjusted to the U.S. 2000 standard population.

†Living with a disability: Respondents who have at least one of the six disability types (hearing, vision, cognition, mobility,self-care, and/or independent living).

Due to changes in BRFSS survey methodology 2011-2018 BRFSS estimates cannot be compared with estimates from previous years. Please refer to Technical Notes for more information about BRFSS survey methodology.

Percentage of Adults Ages 18 Years And Older With No Personal Doctor, KS BRFSS 2018



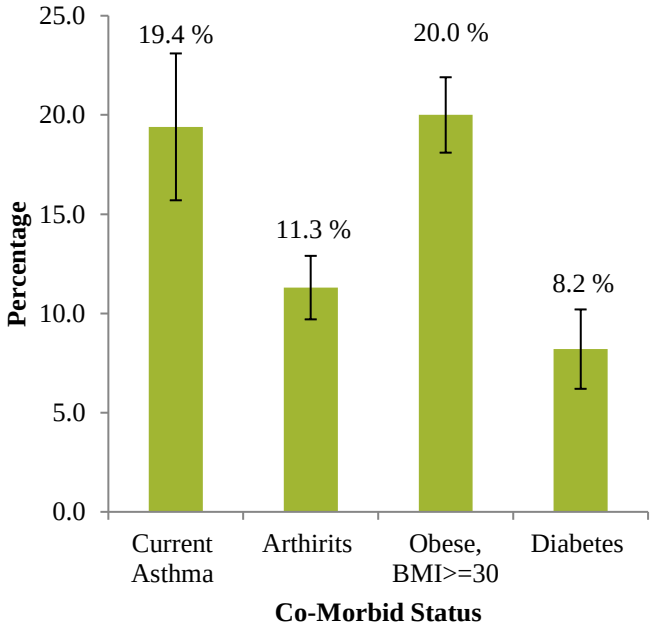
*Prevalence estimates for race and ethnicity were age-adjusted to the U.S. 2000 standard population.
†Living with a disability: Respondents who have at least one of the six disability types (hearing, vision, cognition, mobility, self-care, and/or independent living).

Due to changes in BRFSS survey methodology 2011-2018 BRFSS estimates cannot be compared with estimates from previous years. Please refer to Technical Notes for more information about BRFSS survey methodology.

Percentage of Adults Ages 18 Years and Older With No Personal Doctor by Co-Morbid Conditions, KS BRFSS 2018

Co-Morbid Conditions		Weighted Percentage	95% CI
Current Asthma			
	Yes	19.4	15.7-23.1
	No	22.4	21.2-23.6
Arthritis			
	Yes	11.3	9.7-12.9
	No	26.2	24.8-27.6
Weight			
	Normal or Underweight, BMI<25	26.3	24.1-28.5
	Overweight, 25<= BMI<30	20.2	18.3-22.1
	Obese, BMI>=30	20.0	18.1-21.9
Diabetes			
	Yes	8.2	6.2-10.2
	No	24.1	22.9-25.4

Percentage of Adults Ages 18 Years And Older With No Personal Doctor, by Co-Morbid Conditions, KS BRFSS 2018



The percentage of Kansas adults ages 18 years and older with no personal health care provider was significantly **higher** among:

- Adults with no arthritis compared with those with arthritis.
- Adults who were normal or underweight compared with those who were overweight or obese.
- Adults with no diabetes compared with those with diabetes.

The percentage of Kansas adults ages 18 years and older with no personal health care provider did not differ significantly by current asthma status.

SUMMARY

Approximately 22.3 percent of Kansas adults ages 18 years and older did not have a personal health care provider. In addition, higher percentages of adults who did not have a personal doctor were seen among: males, young adults, African-Americans, other/multi-race adults, Hispanics, adults with income lower than $50,000, adults with lower education, those without co-morbid conditions (arthritis, obesity or diabetes) and those living without a disability.

The Healthy People 2020 target is for 83.9 percent of persons to have a usual primary care provider. Further public health efforts are needed to reach the target and to address disparities in population subgroups in Kansas.

Due to changes in BRFSS survey methodology 2011-2018 BRFSS estimates cannot be compared with estimates from previous years. Please refer to Technical Notes for more information about BRFSS survey methodology.

Injury and Violence: Seat Belt Use

Motor vehicle crashes are the leading cause of death for people ages 1 to 54 years.[4] Crashes can lead to premature death, disability, poor mental health, high medical costs and lost productivity.[5] Seat belts use is one of the most effective ways to reduce injuries and mortality due to motor vehicle crashes.[4] Increasing use of seat belts is one of the objectives for the prevention of unintentional injury. The Healthy People 2020 goal for injury prevention is to prevent unintentional injuries and reduce their consequences.

In 2018, 1 in 5 Kansas adults ages 18 years and older did not always wear a seat belt when they drove or rode in a car. The percentage of Kansas adults who did not always wear a seat belt when they drove or rode in a car was significantly **higher** among:

- Males compared with females
- Adults ages 25-34 years compared with adults ages 45 years and older
- Non-Hispanic whites compared with Hispanics (age-adjusted prevalence)
- Adults who were not college graduates compared with those who were college graduates
- Adults who were uninsured compared with adults who were insured

The percentage of Kansas adults who did not always wear a seat belt when they drove or rode in a car did not differ significantly by annual household income groups and disability status.

Percentage of Adults Ages 18 Years and Older Who Do Not Always Wear a Seat Belt When They Drive or Ride in a Car, KS BRFSS 2018

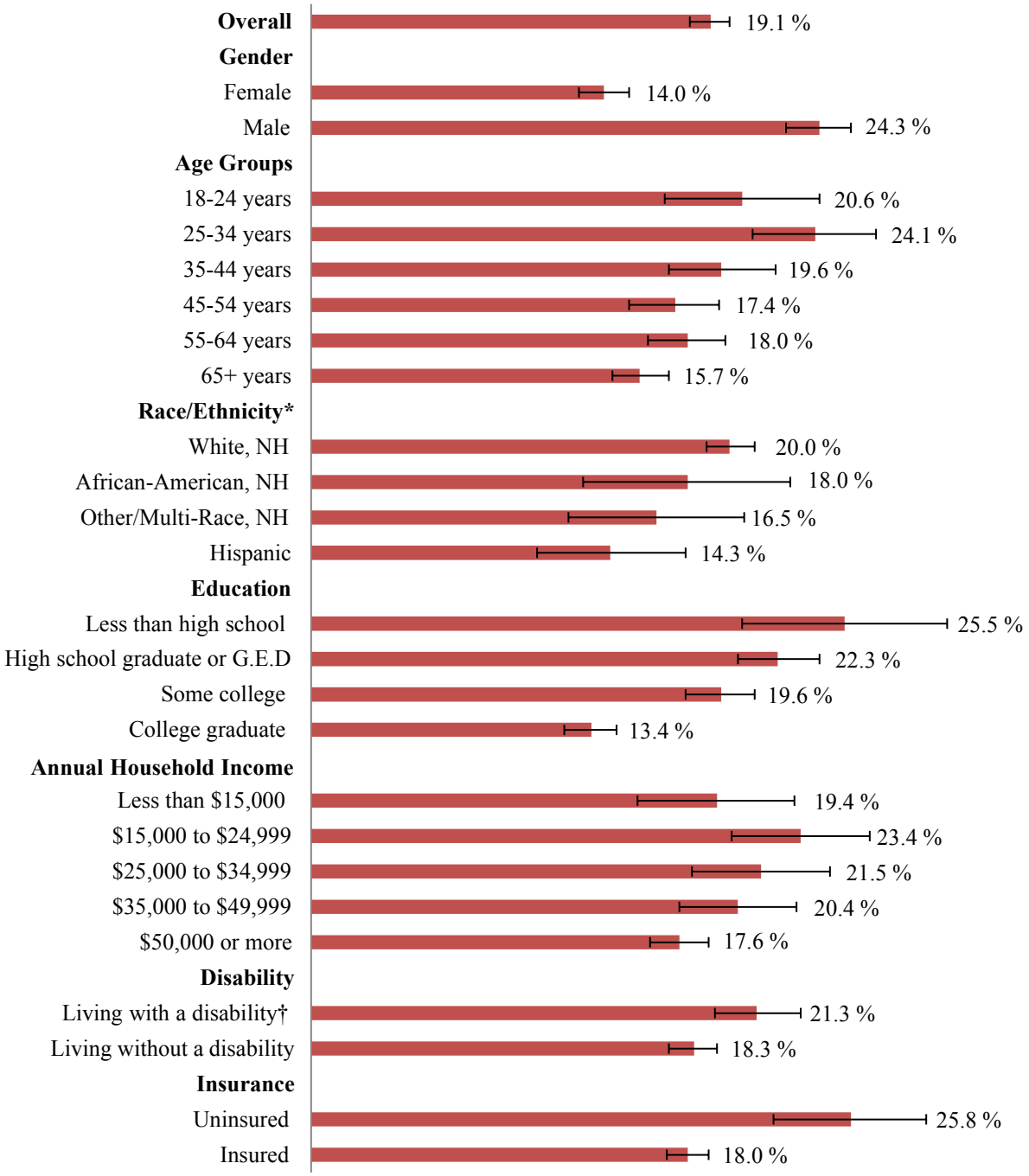
Demographic Characteristics	Weighted Percentage	95% CI
Overall	19.1	18.1-20.0
Gender		
Female	14.0	12.8-15.2
Male	24.3	22.7-25.8
Age Groups		
18-24 years	20.6	16.9-24.3
25-34 years	24.1	21.1-27.0
35-44 years	19.6	17.1-22.2
45-54 years	17.4	15.2-19.5
55-64 years	18.0	16.1-19.8
65+ years	15.7	14.4-17.1
Race/Ethnicity*		
White, NH	20.0	18.9-21.2
African-American, NH	18.0	13.0-22.9
Other/Multi-Race, NH	16.5	12.3-20.7
Hispanic	14.3	10.8-17.9
Education		
Less than high school	25.5	20.6-30.4
High school graduate or G.E.D	22.3	20.4-24.3
Some college	19.6	17.9-21.2
College graduate	13.4	12.1-14.6
Annual Household Income		
Less than $15,000	19.4	15.6-23.1
$15,000 to $24,999	23.4	20.1-26.7
$25,000 to $34,999	21.5	18.2-24.8
$35,000 to $49,999	20.4	17.6-23.2
$50,000 or more	17.6	16.2-19.0
Disability		
Living with a disability†	21.3	19.3-23.4
Living without a disability	18.3	17.1-19.4
Insurance		
Uninsured	25.8	22.1-29.4
Insured	18.0	17.0-19.0

*Prevalence estimates for race and ethnicity were age-adjusted to the U.S. 2000 standard population.

†Living with a disability: Respondents who have at least one of the six disability types (hearing, vision, cognition, mobility,self-care, and/or independent living).

Due to changes in BRFSS survey methodology 2011-2018 BRFSS estimates cannot be compared with estimates from previous years. Please refer to Technical Notes for more information about BRFSS survey methodology.

Percentage of Adults Who Do Not Always Wear a Seatbelt When They Drive or Ride in a Car, KS BRFSS 2018



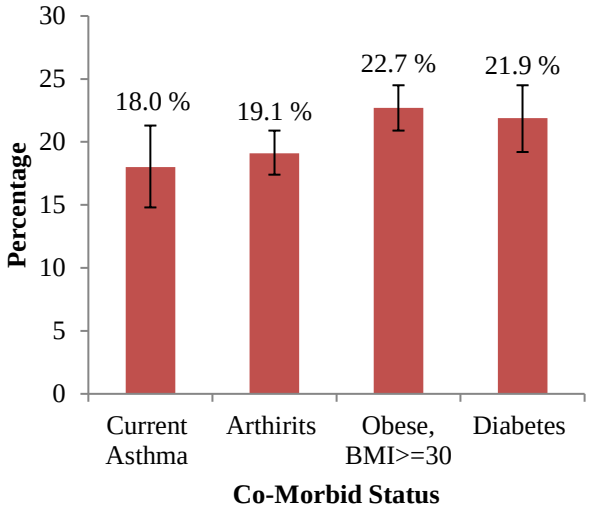
*Prevalence estimates for race and ethnicity were age-adjusted to the U.S. 2000 standard population.
†Living with a disability: Respondents who have at least one of the six disability types (hearing, vision, cognition, mobility, self-care, and/or independent living).

Due to changes in BRFSS survey methodology 2011- 2018 BRFSS estimates cannot be compared with estimates from previous years. Please refer to Technical Notes for more information about BRFSS survey methodology.

Percentage of Adults Who Do Not Always Wear a Seat Belt When They Drive or Ride in a Car by Co-Morbid Conditions, KS BRFSS 2018

Co-Morbid Conditions	Weighted Percentage	95% CI
Current Asthma		
Yes	18.0	14.8-21.3
No	19.0	18.0-20.1
Arthritis		
Yes	19.1	17.4-20.9
No	19.1	17.9-20.3
Weight		
Normal or Underweight, BMI<25	16.3	14.4-18.1
Overweight, 25<= BMI<30	18.7	17.1-20.4
Obese, BMI>=30	22.7	20.9-24.5
Diabetes		
Yes	21.9	19.2-24.5
No	18.7	17.7-19.8

Percentage of Adults Who Do Not Always Wear a Seatbelt When They Drive or Ride in a Car, by Co-Morbid Conditions, KS BRFSS 2018



The percentage of Kansas adults who did not always wear a seat belt when they drove or rode in a car was significantly **higher** among:

- Adults who were obese compared with those who were not obese

The percentage of Kansas adults who did not always wear a seat belt when they drove or rode in a car did not differ significantly by current asthma status, arthritis status or diabetes status.

SUMMARY

Approximately 19.1 percent of Kansas adults ages 18 years and older did not always wear a seat belt when they drove or rode in a car. In addition, higher percentages of adults who did not always wear a seat belt when they drove or rode in a car were seen among: males, adults ages 25-35 years, non-Hispanic whites, adults who were not college graduates, uninsured adults, those with co-morbid conditions (obesity).

The Healthy People 2020 target is for 92 percent of persons to use a seat belt when they drive or ride in a car. Further public health efforts are needed to reach the target and to address disparities in population subgroups in Kansas.

Due to changes in BRFSS survey methodology 2011- 2018 BRFSS estimates cannot be compared with estimates from previous years. Please refer to Technical Notes for more information about BRFSS survey methodology.

Injury and Violence: Falls

Twenty to 30 percent of falls result in moderate to severe injuries.[6] Death can also be an outcome of falls. The death rates from falls among older men and women have risen drastically during the past decade increasing the need for injury prevention. The Healthy People 2020 goal for injury prevention is to prevent an increase in fall- related deaths.[1]

In 2018, approximately 2 in 5 Kansas adults ages 45 years and older had at least one fall related injury during the preceding 12 months. The percentage of Kansas adults ages 45 years and older who had at least one fall related injury during the preceding 12 months was significantly **higher** among:

- Females compared with males
- Adults ages 45 to 54 years compared with adults ages 65 years and older
- Adults who had less than high school and some college education compared with those who are college graduates
- Adults with an annual household income less than $15,000 compared with adults with annual household income of $25,000 or more
- Adults with a disability compared with adults without a disability

The percentage of Kansas adults ages 45 years and older who had at least one fall related injury during the preceding 12 months did not differ significantly between race/ethnicity groups.

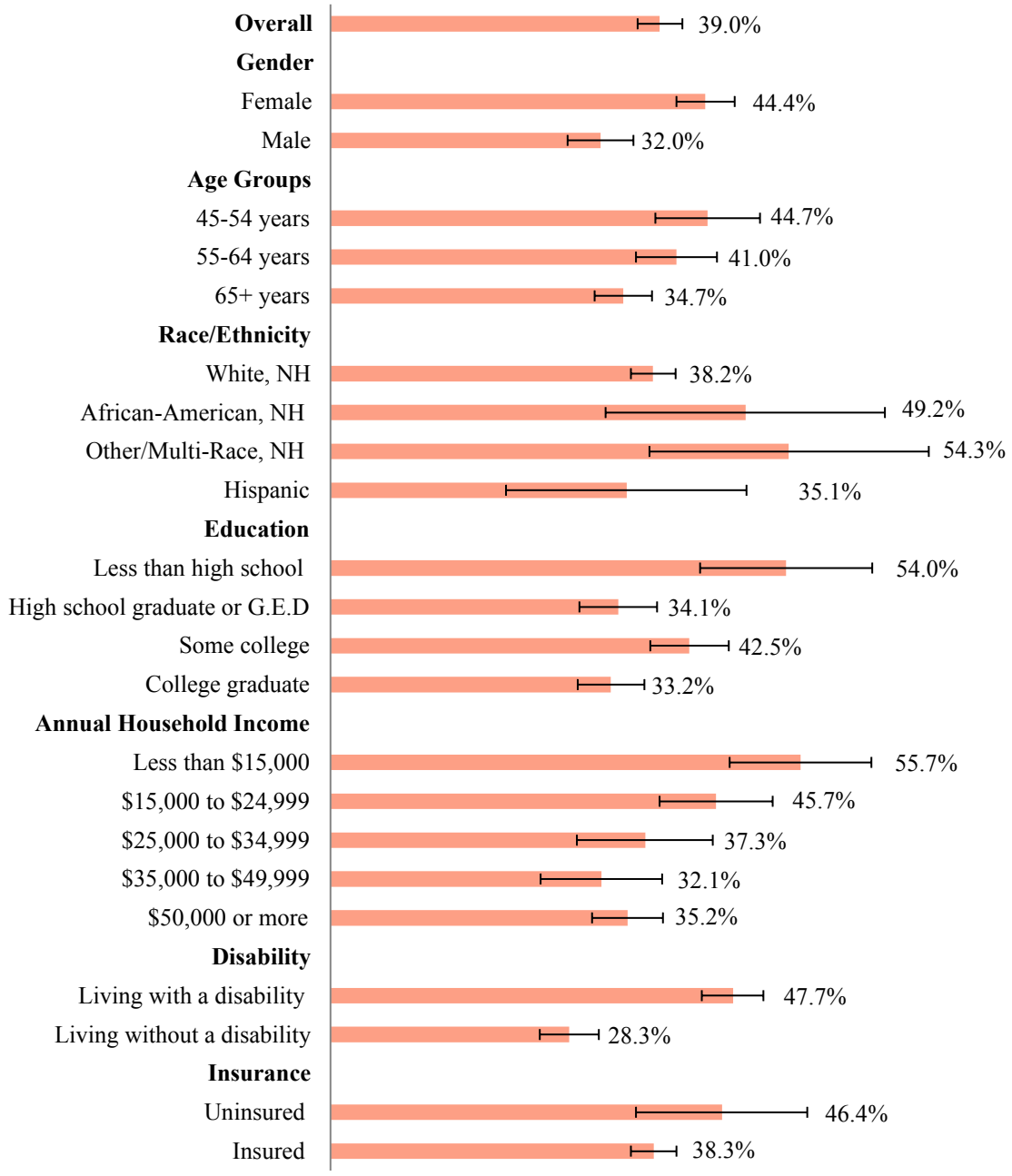
Percentage of Adults Ages 45 Years and Older with at Least One Fall Related Injury During the Preceding 12 Months, KS BRFSS 2018

Demographic Characteristics	Weighted Percentage	95% CI
Overall	39.0	36.4-41.7
Gender		
Female	44.4	41.0-47.9
Male	32.0	28.1-35.9
Age Groups		
45-54 years	44.7	38.5-50.9
55-64 years	41.0	36.2-45.8
65+ years	34.7	31.3-38.1
Race/Ethnicity		
White, NH	38.2	35.6-40.9
African-American, NH	49.2	32.6-65.7
Other/Multi-Race, NH	54.3	37.8-70.9
Hispanic	35.1	20.8-49.3
Education		
Less than high school	54.0	43.8-64.2
High school graduate or G.E.D	34.1	29.5-38.7
Some college	42.5	37.9-47.2
College graduate	33.2	29.3-37.2
Annual Household Income		
Less than $15,000	55.7	47.3-64.1
$15,000 to $24,999	45.7	39.0-52.4
$25,000 to $34,999	37.3	29.2-45.3
$35,000 to $49,999	32.1	24.9-39.3
$50,000 or more	35.2	31.0-39.4
Disability		
Living with a disability	47.7	44.0-51.3
Living without a disability	28.3	24.8-31.8
Insurance		
Uninsured	46.4	36.2-56.5
Insured	38.3	35.6-41.0

†Living with a disability: Respondents who have at least one of the six disability types (hearing, vision, cognition, mobility,self-care, and/or independent living).

Due to changes in BRFSS survey methodology 2011- 2018 BRFSS estimates cannot be compared with estimates from previous years. Please refer to Technical Notes for more information about BRFSS survey methodology.

Percentage of Adults Ages 45 Years and Older with at Least One Fall Related Injury During the Preceding 12 Months, KS BRFSS 2018



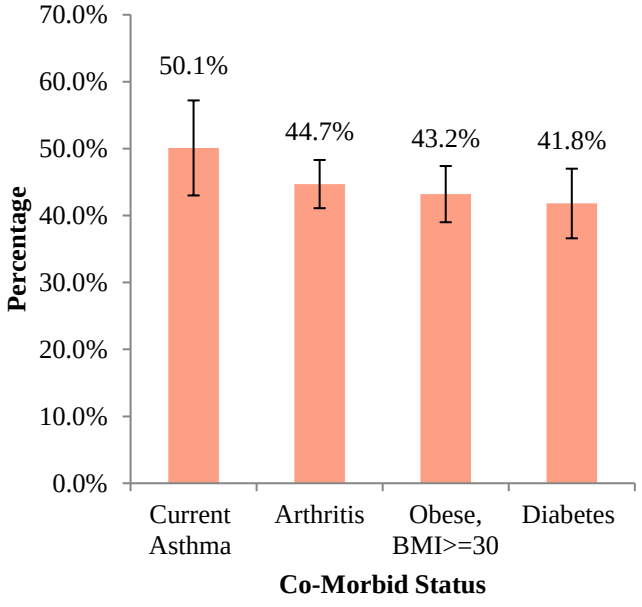
†Living with a disability: Respondents who have at least one of the six disability types (hearing, vision, cognition, mobility, self-care, and/or independent living).

Due to changes in BRFSS survey methodology 2011- 2018 BRFSS estimates cannot be compared with estimates from previous years. Please refer to Technical Notes for more information about BRFSS survey methodology.

Percentage of Adults Ages 45 Years and Older with at Least One Fall Related Injury During the Preceding 12 Months by Co-Morbid Conditions, KS BRFSS 2018

Co-Morbid Conditions	Weighted Percentage	95% CI
Current Asthma		
Yes	50.1	43.0-57.2
No	37.4	34.5-40.2
Arthritis		
Yes	44.7	41.2-48.3
No	31.1	27.3-34.9
Weight		
Normal or Underweight, BMI<25	34.3	29.0-39.6
Overweight, 25<= BMI<30	36.1	31.4-40.8
Obese, BMI>=30	43.2	39.0-47.4
Diabetes		
Yes	41.8	36.5-47.0
No	38.3	35.3-41.3

Percentage of Adults Ages 45 Years and Older with at Least One Fall Related Injury During the Preceding 12 Months, by Co-Morbid Conditions, KS BRFSS 2018



The percentage of Kansas adults ages 45 years and older who had at least one fall related injury during the preceding 12 months was significantly **higher** among:

- Adults with current asthma compared with those with no current asthma
- Adults with arthritis compared with those without arthritis

The percentage of Kansas adults 45 years and older who had at least one fall related injury during the preceding 12 months did not differ significantly by weight category or diabetes status.

SUMMARY

Approximately 39 percent of Kansas adults ages 45 years and older had at least one fall related injury during the preceding 12 months. In addition, higher percentages of females, adults ages 45 to 54 years old, adults who had less than high school and some college education, adults with annual household income of less than $25,000, adults with an annual household income less than $15,000, adults with a disability, adults with current asthma, and arthritis had at least one fall related injury during the preceding 12 months

A Healthy People 2020 objective is to prevent an increase in fall-related deaths and the best way to do this is to prevent falls from occurring. Further public health efforts are needed to reach the objective and to address disparities in population subgroups in Kansas.

Due to changes in BRFSS survey methodology 2011- 2018 BRFSS estimates cannot be compared with estimates from previous years. Please refer to Technical Notes for more information about BRFSS survey methodology.

Clinical Preventative Services: Flu Vaccine

Life expectancy has increased since the 20th century largely due to several immunizations. Vaccines are a core component of any preventative service and are a very cost effective preventive service.[6] Influenza can have a costly impact resulting in doctor visits, hospitalization, loss of productivity and death.[7] The Healthy People 2020 goal is to increase the percentage of non- institutionalized adults who get vaccinated annually against seasonal influenza.

In 2018, approximately 2 in 3 Kansas adults ages 18 years and older did not get immunized against influenza during the past 12 months. The percentage of Kansas adults who did not get immunized against influenza during the past 12 months was significantly **higher** among:

- Males compared with females
- Adults ages 18 to 54 years compared with adults ages 55 years and older
- Adults who are not college graduates compared with college graduates
- Adults with annual household income of less than $35,000 compared with adults whose annual household income was $50,000 or greater
- Adults living without a disability compared with those living with a disability
- Adults with no insurance compared with adults with insurance

The percentage of Kansas adults ages 18 years and older who did not get immunized against influenza during the past 12 months did not differ significantly by race/ethnicity groups.

Percentage of Adults Ages 18 Years and Older Who Did Not Get Immunized Against Influenza During the Past 12 Months, KS BRFSS 2018

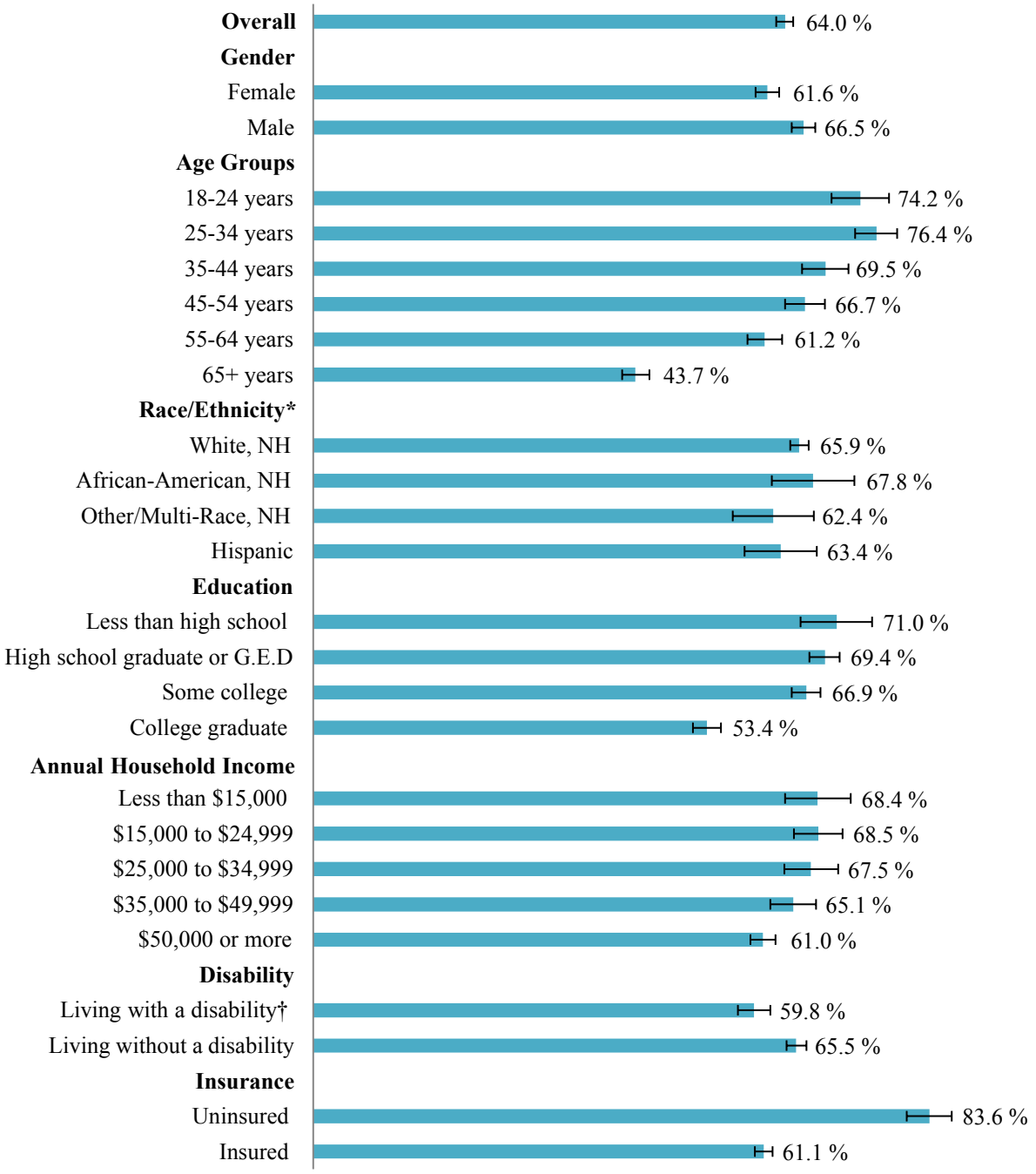
Demographic Characteristics	Weighted Percentage	95% CI
Overall	64.0	62.8-65.1
Gender		
Female	61.6	60.0-63.2
Male	66.5	64.9-68.1
Age Groups		
18-24 years	74.2	70.3-78.1
25-34 years	76.4	73.5-79.2
35-44 years	69.5	66.3-72.6
45-54 years	66.7	64.0-69.4
55-64 years	61.2	58.9-63.6
65+ years	43.7	41.9-45.6
Race/Ethnicity*		
White, NH	65.9	64.7-67.2
African-American, NH	67.8	62.2-73.4
Other/Multi-Race, NH	62.4	56.9-67.9
Hispanic	63.4	58.5-68.3
Education		
Less than high school	71.0	66.1-75.8
High school graduate or G.E.D	69.4	67.3-71.4
Some college	66.9	64.9-68.8
College graduate	53.4	51.5-55.3
Annual Household Income		
Less than $15,000	68.4	64.0-72.9
$15,000 to $24,999	68.5	65.2-71.8
$25,000 to $34,999	67.5	63.9-71.2
$35,000 to $49,999	65.1	62.0-68.2
$50,000 or more	61.0	59.3-62.7
Disability		
Living with a disability†	59.8	57.6-62.0
Living without a disability	65.5	64.2-66.9
Insurance		
Uninsured	83.6	80.5-86.6
Insured	61.1	59.9-62.3

*Prevalence estimates for race and ethnicity were age-adjusted to the U.S. 2000 standard population.

†Living with a disability: Respondents who have at least one of the six disability types (hearing, vision, cognition, mobility,self-care, and/or independent living).

Due to changes in BRFSS survey methodology 2011- 2018 BRFSS estimates cannot be compared with estimates from previous years. Please refer to Technical Notes for more information about BRFSS survey methodology.

Percentage of Adults Ages 18 Years and Older Who Did Not Get Immunized Against Influenza During the Past 12 Months, KS BRFSS 2018



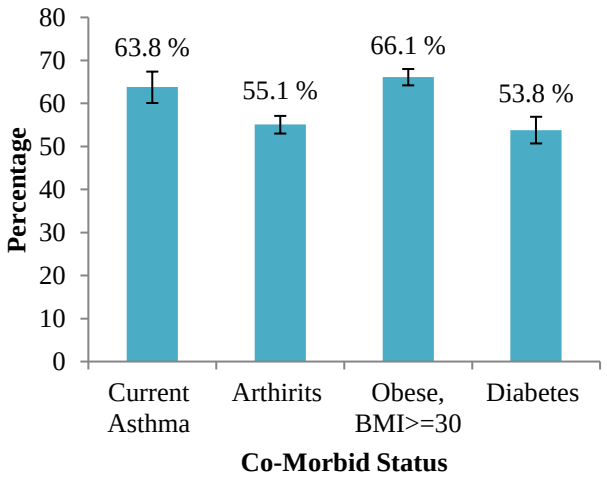
*Prevalence estimates for race and ethnicity were age-adjusted to the U.S. 2000 standard population.
†Living with a disability: Respondents who have at least one of the six disability types (hearing, vision, cognition, mobility, self-care, and/or independent living).

Due to changes in BRFSS survey methodology 2011- 2018 BRFSS estimates cannot be compared with estimates from previous years. Please refer to Technical Notes for more information about BRFSS survey methodology.

Percentage of Adults Ages 18 Years and Older Who Did Not Get Immunized Against Influenza During the Past 12 Months by Co-Morbid Conditions, KS BRFSS 2018

Co-Morbid Conditions	Weighted Percentage	95% CI
Current Asthma		
Yes	63.8	60.1-67.4
No	63.8	62.6-65.0
Arthritis		
Yes	55.1	53.0-57.1
No	67.1	65.7-68.4
Weight		
Normal or Underweight, BMI<25	62.9	60.6-65.1
Overweight, 25<= BMI<30	63.5	61.6-65.5
Obese, BMI>=30	66.1	64.2-68.0
Diabetes		
Yes	53.8	50.7-56.9
No	65.3	64.1-66.5

Percentage of Adults Ages 18 Years and Older Who Did Not Get Immunized Against Influenza During the Past 12 Months, by Co-Morbid Conditions, KS BRFSS 2018



The percentage of Kansas adults ages 18 years and older who did not get immunized against influenza during the past 12 months was significantly **higher** among:

- Adults without arthritis compared with those with arthritis
- Adults without diabetes compared with those with diabetes

The percentage of Kansas adults ages 18 years and older who did not get immunized against influenza during the past 12 months did not differ significantly by current asthma status or weight category.

People at risk of developing flu-related complications include those with asthma and adults ages 65 years and older.[8] Approximately 64 percent of Kansas adults with current asthma and 44 percent of adults who are at risk of developing flu-related complications (adults ages 65 years and older) did not get immunized against influenza during the past 12 months.

SUMMARY

Approximately 64 percent of Kansas adults ages 18 years and older did not get immunized against influenza during the past 12 months. In addition, higher percentages of adults who did not get immunized against influenza during the past 12 months were seen among: males, adults ages 18 to 54 years, adults who are not college graduates, adults with lower income, adults with no insurance, those without co-morbid conditions (arthritis or diabetes) and those living without disabilities.

The Healthy People 2020 goal is to increase the percentage of noninstitutionalized adults who get vaccinated annually against seasonal influenza. To meet this goal, further public health efforts are needed in Kansas.

Due to changes in BRFSS survey methodology 2011- 2018 BRFSS estimates cannot be compared with estimates from previous years. Please refer to Technical Notes for more information about BRFSS survey methodology.

Clinical Preventative Services:
Pneumonia Vaccine

In the U.S., about 1 million adults get pneumococcal pneumonia and 5 to 7 percent will die from it every year.[9] The best way to protect adults from pneumonia is to get vaccinated. Vaccines are a core component of any preventative service and are a very cost effective preventive service.[6] The Healthy People 2020 goal is to increase the percentage of non-institutionalized adults ages 65 years and older who are vaccinated against the pneumococcal disease to 90 percent.

In 2018, approximately 1 in 4 Kansas adults ages 65 years and older have never received a pneumonia vaccination. The percentage of Kansas adults ages 65 years and older who never received a pneumonia vaccination was significantly **higher** among:

- Males compared with females
- Adults who are high school graduates compared to college graduates
- Adults with no insurance compared with adults with insurance

The percentage of Kansas adults ages 65 years and older who never received a pneumonia vaccination did not differ significantly by race/ethnicity groups, annual household income groups or living with a disability status.

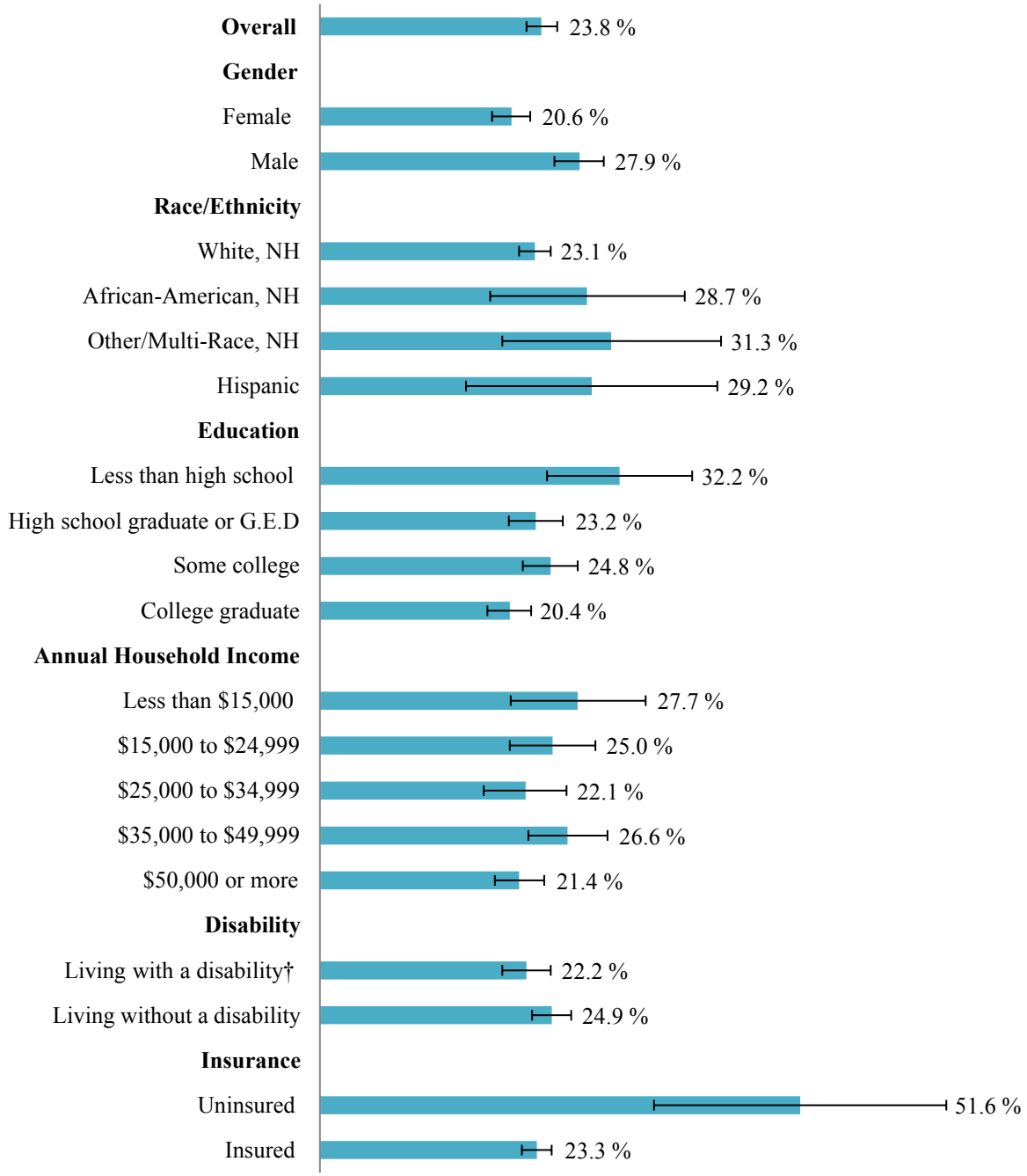
Percentage of Adults Ages 65 Years and Older Who Have Never Had Pneumonia Vaccination, KS BRFSS 2018

Demographic Characteristics	Weighted Percentage	95% CI
Overall	23.8	22.2-25.5
Gender		
Female	20.6	18.5-22.6
Male	27.9	25.2-30.5
Race/Ethnicity		
White, NH	23.1	21.4-24.8
African-American, NH	28.7	18.3-39.2
Other/Multi-Race, NH	31.3	19.6-43.1
Hispanic	29.2	15.7-42.7
Education		
Less than high school	32.2	24.4-40.0
High school graduate or G.E.D	23.2	20.3-26.1
Some college	24.8	21.8-27.7
College graduate	20.4	18.0-22.7
Annual Household Income		
Less than $15,000	27.7	20.5-35.0
$15,000 to $24,999	25.0	20.4-29.6
$25,000 to $34,999	22.1	17.6-26.5
$35,000 to $49,999	26.6	22.4-30.9
$50,000 or more	21.4	18.8-24.1
Disability		
Living with a disability†	22.2	19.6-24.8
Living without a disability	24.9	22.8-27.0
Insurance		
Uninsured	51.6	35.9-67.3
Insured	23.3	21.7-24.9

†Living with a disability: Respondents who have at least one of the six disability types (hearing, vision, cognition, mobility,self-care, and/or independent living).

Due to changes in BRFSS survey methodology 2011- 2018 BRFSS estimates cannot be compared with estimates from previous years. Please refer to Technical Notes for more information about BRFSS survey methodology.

Percentage of Adults Ages 65 Years and Older Who Have Never Had Pneumonia Vaccination, KS BRFSS 2018



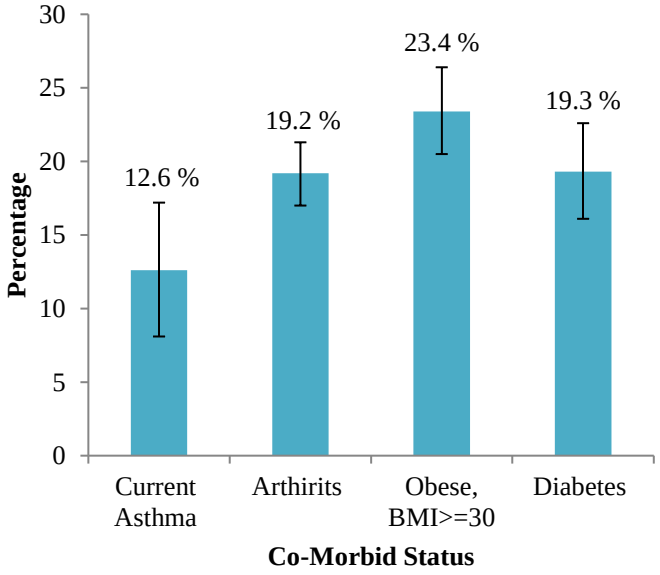
*Prevalence estimates for race and ethnicity were age-adjusted to the U.S. 2000 standard population.
†Living with a disability: Respondents who have at least one of the six disability types (hearing, vision, cognition, mobility, self-care, and/or independent living).

Due to changes in BRFSS survey methodology 2011- 2018 BRFSS estimates cannot be compared with estimates from previous years. Please refer to Technical Notes for more information about BRFSS survey methodology.

Percentage of Adults Ages 65 Years and Older Who Have Never Had Pneumonia Vaccination by Co-Morbid Conditions, KS BRFSS 2018

Co-Morbid Conditions		Weighted Percentage	95% CI
Current Asthma			
	Yes	12.6	8.1-17.2
	No	24.8	23.1-26.6
Arthritis			
	Yes	19.2	17.0-21.3
	No	28.9	26.4-31.4
Weight			
	Normal or Underweight, BMI<25	23.4	20.4-26.5
	Overweight, 25<= BMI<30	23.3	20.6-26.0
	Obese, BMI>=30	23.4	20.5-26.4
Diabetes			
	Yes	19.3	16.1-22.6
	No	25.4	23.5-27.3

Percentage of Adults Ages 65 Years and Older Who Have Never Had Pneumonia Vaccination, by Co-Morbid Conditions, KS BRFSS 2018



The percentage of Kansas adults ages 65 years and older who never received a pneumonia vaccination was significantly **higher** among:

- Adults without current asthma compared with those with current asthma
- Adults without arthritis compared with those with arthritis
- Adults without diabetes compare to those with diabetes

The percentage of Kansas adults ages 65 years and older who never received a pneumonia vaccination did not differ significantly by weight category.

SUMMARY

Approximately 23.5 percent of Kansas adults ages 65 years and older have never received a pneumonia vaccination. In addition, higher percentages of adults who have never received a pneumonia vaccination were seen among: males, adults who are high school graduates, adults with no insurance, those without co-morbid conditions (current asthma, arthritis or diabetes).

The Healthy People 2020 goal is to increase the percentage of non-institutionalized adults ages 65 years and older who are vaccinated against the pneumococcal disease to 90 percent. To meet the goal for Kansas, the percentage of adults who get immunized against pneumococcal needs to increase; further public health efforts are needed.

Due to changes in BRFSS survey methodology 2011- 2018 BRFSS estimates cannot be compared with estimates from previous years. Please refer to Technical Notes for more information about BRFSS survey methodology.

Clinical Preventative Services:
Cervical Cancer

The number of cervical cancer cases and deaths have decreased during the past 40 years likely due to the increase in women getting regular cervical screenings.[10] It is important to continue this trend as the Healthy People 2020 goal is to increase the percentage of women ages 21 to 65 years who receive a cervical cancer screening based on the most recent guidelines.

In 2018, approximately 1 in 5 Kansas women ages 21 to 65 years did not get a Pap smear test within the preceding three years. The percentage of Kansas women ages 21 to 65 years who did not get a Pap smear test within the preceding three years was significantly **higher** among:

- Women ages 21 to 24 years compared with women ages 25 to 54 years
- Women with high school graduate or GED, or some college education compared with those who were college graduates
- Women with annual household income less than $25,000 compared with women with annual household income more than $50,000
- Women living with a disability compared with those living without a disability
- Women who were uninsured compared with women who were insured

The percentage of Kansas women ages 21 to 65 years who did not get a Pap smear test within the preceding three years did not differ significantly between race/ethnicity groups.

Percentage of Women Ages 21 to 65 Years Who Did Not Have a Pap Smear Test Within the Preceding 3 Years, KS BRFSS 2018

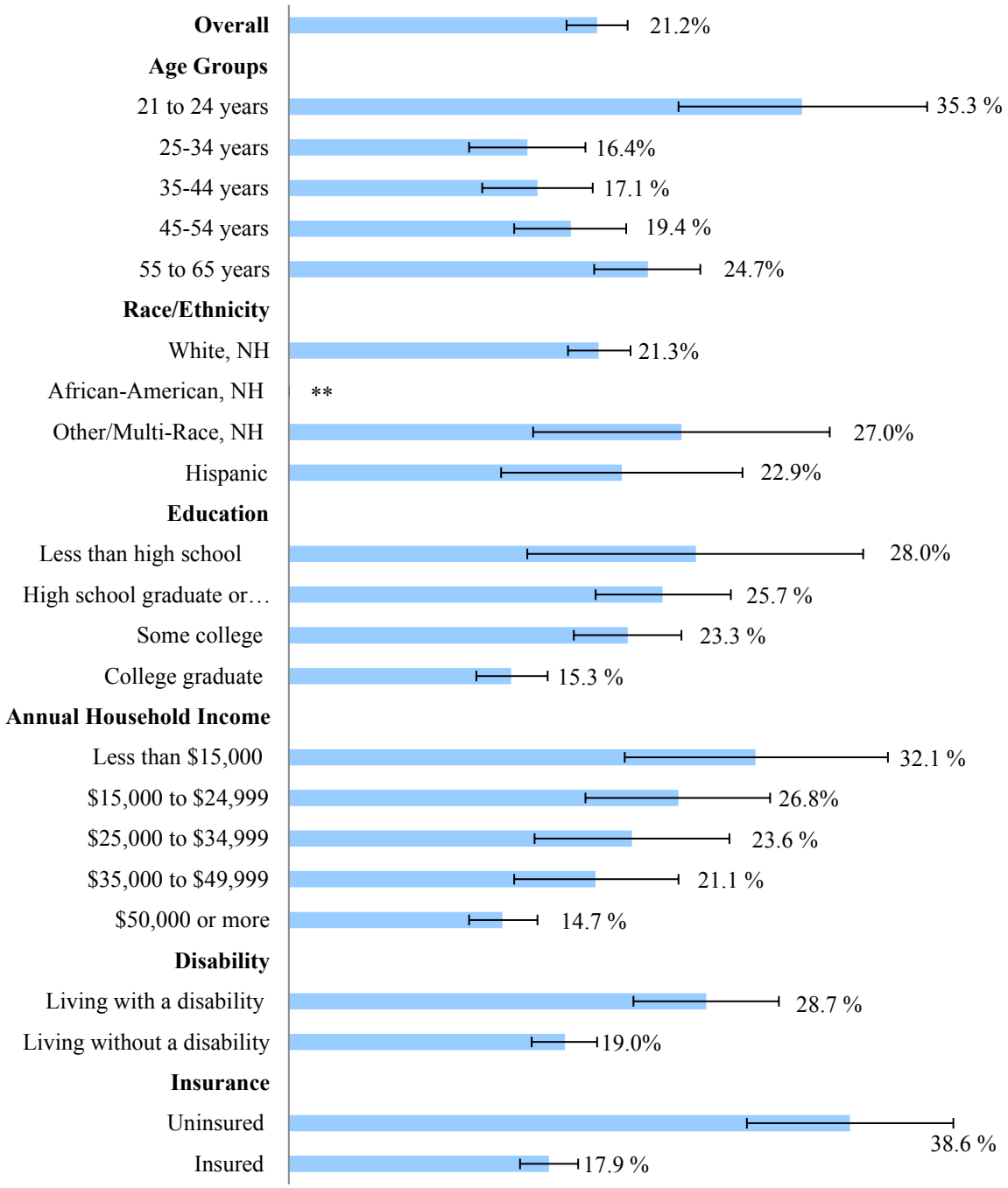
Demographic Characteristics	Weighted Percentage	95% CI
Overall	21.2	19.1-23.3
Age Groups		
21 to 24 years	35.3	26.7-43.8
25-34 years	16.4	12.4-20.4
35-44 years	17.1	13.3-20.9
45-54 years	19.4	15.6-23.3
55 to 65 years	24.7	21.1-28.4
Race/Ethnicity		
White, NH	21.3	19.1-23.4
African-American, NH	**	**
Other/Multi-Race, NH	27.0	16.8-37.2
Hispanic	22.9	14.6-31.2
Education		
Less than high school	28.0	16.5-39.6
High school graduate or G.E.D	25.7	21.0-30.3
Some college	23.3	19.6-27.0
College graduate	15.3	12.8-17.7
Annual Household Income		
Less than $15,000	32.1	23.0-41.1
$15,000 to $24,999	26.8	20.5-33.2
$25,000 to $34,999	23.6	16.9-30.3
$35,000 to $49,999	21.1	15.4-26.7
$50,000 or more	14.7	12.3-17.0
Disability		
Living with a disability	28.7	23.7-33.7
Living without a disability	19.0	16.8-21.3
Insurance		
Uninsured	38.6	31.5-45.7
Insured	17.9	15.9-19.9

** Insufficient sample and/or statistically unreliable estimate.

†Living with a disability: Respondents who have at least one of the six disability types (hearing, vision, cognition, mobility,self-care, and/or independent living).

Due to changes in BRFSS survey methodology 2011- 2018 BRFSS estimates cannot be compared with estimates from previous years. Please refer to Technical Notes for more information about BRFSS survey methodology.

Percentage of Women Aged 21 to 65 Years Who Did Not Have a Pap Smear Test Within the Preceding 3 Years, KS BRFSS 2018



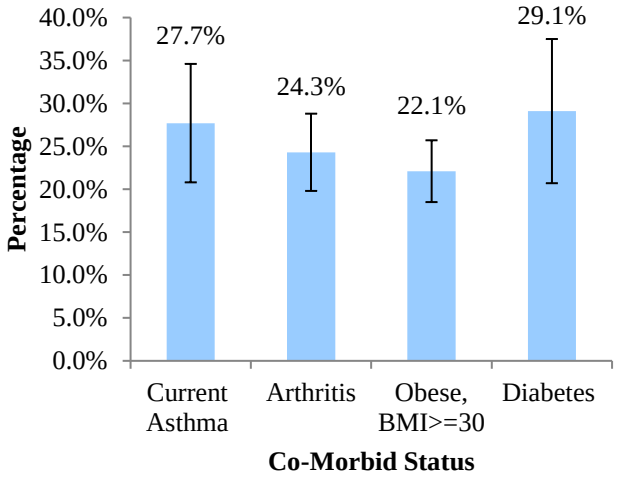
** Insufficient sample and/or statistically unreliable estimate.
†Living with a disability: Respondents who have at least one of the six disability types (hearing, vision, cognition, mobility, self-care, and/or independent living).

Due to changes in BRFSS survey methodology 2011- 2018 BRFSS estimates cannot be compared with estimates from previous years. Please refer to Technical Notes for more information about BRFSS survey methodology.

Percentage of Women Ages 21 to 65 Years Who Did Not Have a Pap Smear Test Within the Preceding 3 Years by Co-Morbid Conditions, KS BRFSS 2018

Co-Morbid Conditions	Weighted Percentage	95% CI
Current Asthma		
Yes	27.7	20.8-34.5
No	20.4	18.3-22.6
Arthritis		
Yes	24.3	19.8-28.9
No	20.4	18.1-22.8
Weight		
Normal or Underweight, BMI<25	19.2	16.0-22.4
Overweight, 25<= BMI<30	22.2	17.8-26.7
Obese, BMI>=30	22.1	18.5-25.7
Diabetes		
Yes	29.1	20.7-37.5
No	20.6	18.5-22.7

Percentage of Women Aged 21 to 65 Years Who Did Not Have a Pap Smear Test Within the Preceding 3 Years, by Co-Morbid Conditions, KS BRFSS 2018



The percentage of Kansas women ages 21 to 65 years who did not did get a Pap smear test within the preceding three years did not differ significantly by current asthma status, arthritis, diabetes or weight status.

SUMMARY

Approximately 21 percent of Kansas women ages 21 to 65 years did not did get a Pap smear test within the preceding three years. In addition, higher percentages of women ages 21 to 24, women with no insurance, living with a disability, women with lower income, and women with lower education did not get a Pap smear test within the preceding three years.

A Healthy People 2020 objective is to increase the percentage of women ages 21 to 65 years who receive a cervical cancer screening based on guidelines to 93 percent. Therefore further public health efforts are needed to reach the objective and to address disparities in population subgroups in Kansas.

Due to changes in BRFSS survey methodology 2011- 2018 BRFSS estimates cannot be compared with estimates from previous years. Please refer to Technical Notes for more information about BRFSS survey methodology.

Clinical Preventative Services: Breast Cancer

In the United States breast cancer is the most common cancer among women.[11] Thus women receiving breast cancer screening based on the most recent guidelines is essential. The Healthy People 2020 goal is to increase the percentage of women ages 50 to 74 years who receive breast cancer screening based on the most recent guidelines.

In 2018, approximately 1 in 4 Kansas women ages 50 to 74 years did not receive a mammogram within the preceding two years. The percentage of Kansas women ages 50 to 74 years who did not receive a mammogram within the preceding two years was significantly **higher** among:

- Women ages 50 to 59 years compared with women ages 65 to 74 years
- Women without a high school education and with those who were high school graduate or G.E.D compared with college graduates
- Women in lower annual household income groups compared with women in higher annual household income groups
- Women living with a disability compared with those living without a disability
- Women who were uninsured compared with women who were insured

The percentage of Kansas women ages 50 to 74 years who did not receive a mammogram within the preceding two years did not differ significantly between race/ethnicity groups.

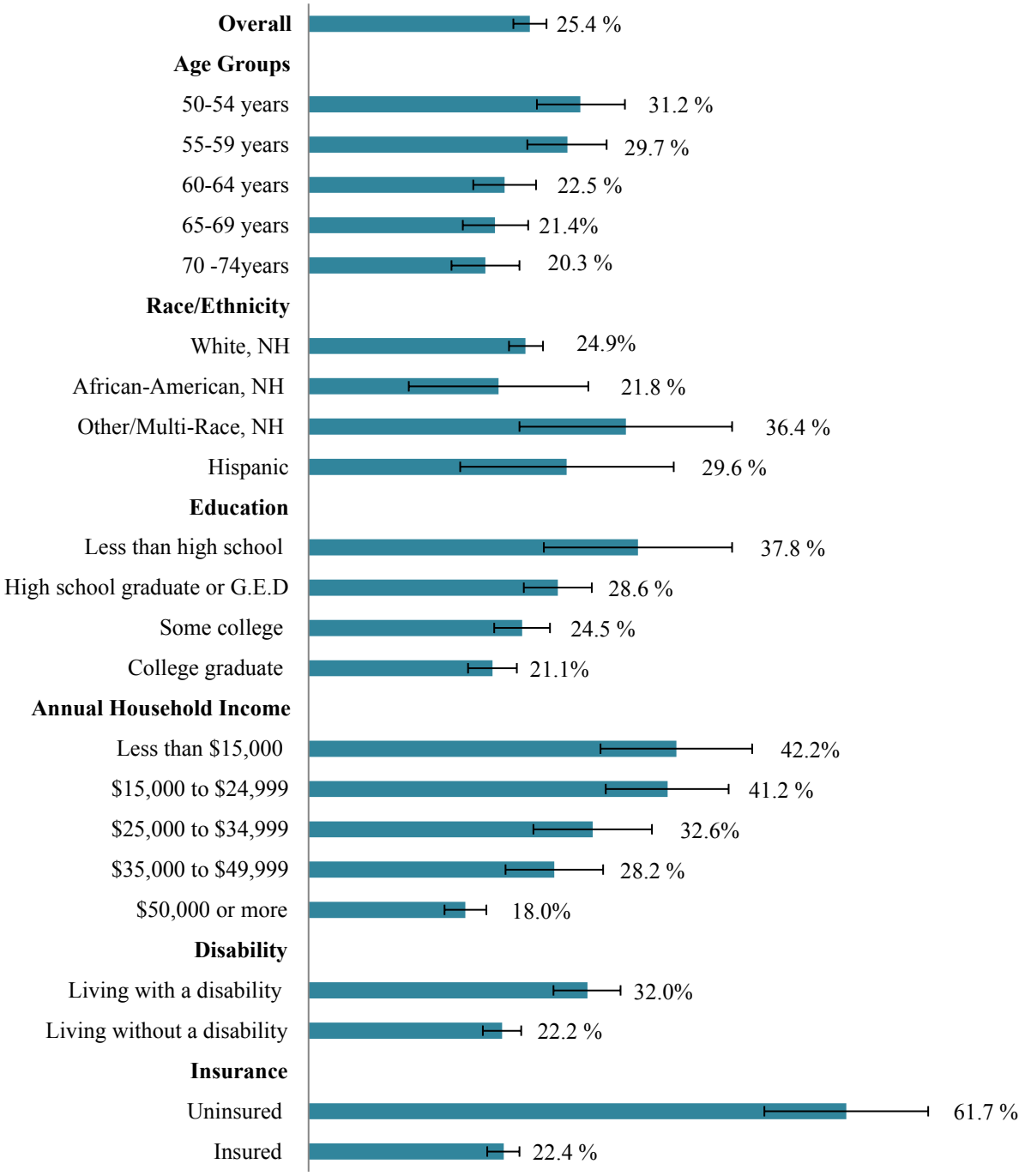
Percentage of Women Ages 50 to 74 Years Who Did Not Have a Mammogram Within the Preceding 2 Years, KS BRFSS 2018

Demographic Characteristics	Weighted Percentage	95% CI
Overall	25.4	23.5-27.3
Age Groups		
50-54 years	31.2	26.1-36.2
55-59 years	29.7	25.2-34.3
60-64 years	22.5	18.9-26.1
65-69 years	21.4	17.6-25.1
70 -74years	20.3	16.4-24.2
Race/Ethnicity		
White, NH	24.9	22.9-26.8
African-American, NH	21.8	11.5-32.1
Other/Multi-Race, NH	36.4	24.2-48.6
Hispanic	29.6	17.3-41.8
Education		
Less than high school	37.8	27.0-48.6
High school graduate or G.E.D	28.6	24.7-32.5
Some college	24.5	21.3-27.7
College graduate	21.1	18.3-23.9
Annual Household Income		
Less than $15,000	42.2	33.5-50.9
$15,000 to $24,999	41.2	34.2-48.3
$25,000 to $34,999	32.6	25.8-39.4
$35,000 to $49,999	28.2	22.6-33.8
$50,000 or more	18.0	15.6-20.4
Disability		
Living with a disability	32.0	28.2-35.9
Living without a disability	22.2	20.0-24.4
Insurance		
Uninsured	61.7	52.3-71.1
Insured	22.4	20.6-24.3

†Living with a disability: Respondents who have at least one of the six disability types (hearing, vision, cognition, mobility,self-care, and/or independent living).

Due to changes in BRFSS survey methodology 2011- 2018 BRFSS estimates cannot be compared with estimates from previous years. Please refer to Technical Notes for more information about BRFSS survey methodology.

Percentage of Women Aged 50 to 74 Years Who Did Not Have a Mammogram Within the Preceding 2 Years, KS BRFSS 2018



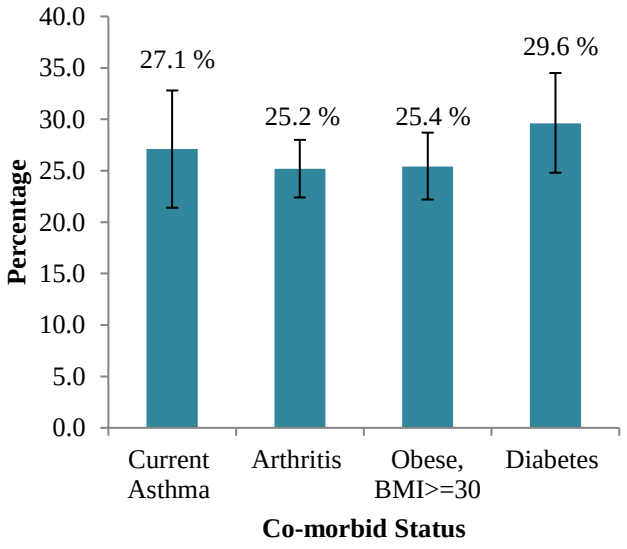
†Living with a disability: Respondents who have at least one of the six disability types (hearing, vision, cognition, mobility, self-care, and/or independent living).

Due to changes in BRFSS survey methodology 2011- 2018 BRFSS estimates cannot be compared with estimates from previous years. Please refer to Technical Notes for more information about BRFSS survey methodology.

Percentage of Women Ages 50 to 74 Years Who Did Not Have a Mammogram Within the Preceding 2 Years by Co-Morbid Conditions, KS BRFSS 2018

Co-Morbid Conditions	Weighted Percentage	95% CI
Current Asthma		
Yes	27.1	21.4-32.8
No	25.1	23.1-27.2
Arthritis		
Yes	25.2	22.4-28.0
No	25.6	22.9-28.3
Weight		
Normal or Underweight, BMI<25	27.2	23.5-31.0
Overweight, 25<= BMI<30	23.6	20.0-27.1
Obese, BMI>=30	25.4	22.1-28.6
Diabetes		
Yes	29.6	24.7-34.4
No	24.4	22.3-26.5

Percentage of Women Ages 50-74 Years Old Who Reported They Had Not Had a Mammogram within the Preceding Two Years, by Co-morbid Conditions



The percentage of Kansas women ages 50 to 74 years who did not receive a mammogram within the preceding two years did not differ significantly by current asthma status, arthritis status, diabetes status and weight status.

SUMMARY

Approximately 25 percent of Kansas women ages 50 to 74 years did not receive a mammogram within the preceding two years. In addition, higher percentages of women ages 50 to 59 years, women with no insurance, women with lower income, women with lower education, those living with a disability, and who were uninsured did not receive a mammogram with the preceding two years.

A Healthy People 2020 objective is to increase the percentage of women ages 50 to 74 years who receive a breast cancer screening based on most recent guidelines to 81.1 percent. Therefore further public health efforts are needed to reach the objective and to address disparities in population subgroups in Kansas.

Due to changes in BRFSS survey methodology 2011- 2018 BRFSS estimates cannot be compared with estimates from previous years. Please refer to Technical Notes for more information about BRFSS survey methodology.

Clinical Preventative Services:
Colorectal Cancer

Colorectal cancer is the second leading cause of all cancer deaths among males and females in the United States, thus adults being up-to-date on screening is essential.[12] The U.S. Preventative Task Force has given the most up-to-date screening guidelines, which advise for one of the following: a) Fecal Occult Blood Test (FOBT) done within the past year b) sigmoidoscopy done within the past 5 years with FOBT done within the past 3 years, or c) colonoscopy done within the past 10 years. The Healthy People 2020 goal is to increase the percentage of adults ages 50 to 75 years who received colorectal cancer screening based on the most recent guidelines.

In 2018, approximately 1 in 3 Kansas adults ages 50 to 75 years did not meet colorectal screening guidelines. The percentage of Kansas adults ages 50 to 75 years who did not meet colorectal screening guidelines was significantly **higher** among:

- Adults ages 50-54 years compared with adults in older age groups
- Hispanics compared with non-Hispanic whites
- Adults with lower education compared with adults in higher education groups
- Adults with lower income compared with adults in higher income groups
- Adults with no insurance compared with adults with insurance

The percentage of Kansas adults ages 50 to 75 years who did not meet colorectal screening guidelines not differ significantly by gender groups or disability status.

Percentage of Adults Ages 50 to 75 Years Who Did Not Meet Colorectal Cancer Screening Guidelines, KS BRFSS 2018**

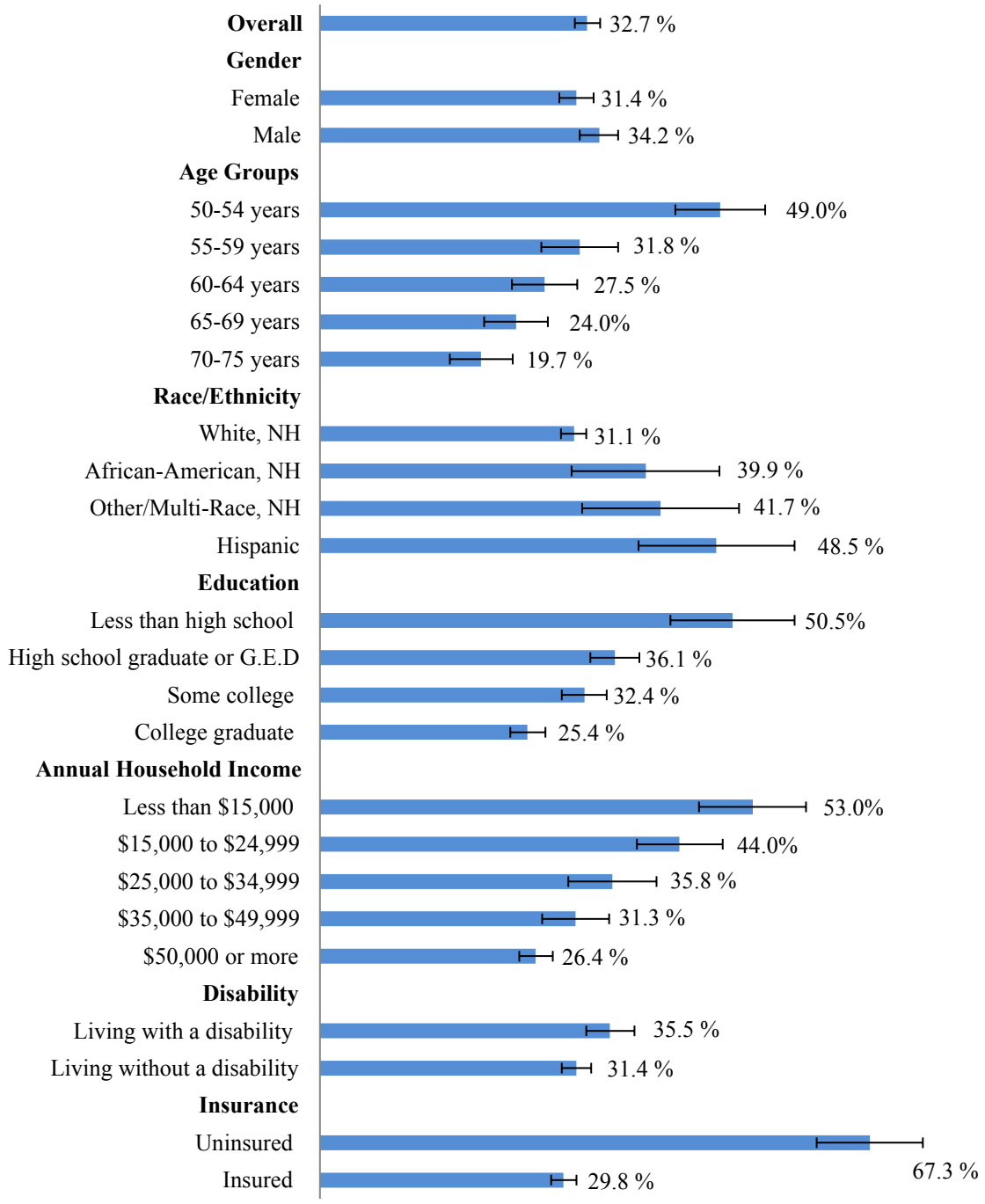
Demographic Characteristics	Weighted Percentage	95% CI
Overall	32.7	31.2-34.3
Gender		
Female	31.4	29.3-33.5
Male	34.2	31.8-36.5
Age Groups		
50-54 years	49.0	43.5-54.5
55-59 years	31.8	27.1-36.5
60-64 years	27.5	23.5-31.5
65-69 years	24.0	20.1-27.9
70-75 years	19.7	15.9-23.6
Race/Ethnicity		
White, NH	31.1	29.5-32.6
African-American, NH	39.9	30.8-48.9
Other/Multi-Race, NH	41.7	32.1-51.3
Hispanic	48.5	39.0-58.1
Education		
Less than high school	50.5	42.9-58.1
High school graduate or G.E.D	36.1	33.1-39.1
Some college	32.4	29.6-35.1
College graduate	25.4	23.3-27.6
Annual Household Income		
Less than $15,000	53.0	46.4-59.5
$15,000 to $24,999	44.0	38.8-49.3
$25,000 to $34,999	35.8	30.4-41.2
$35,000 to $49,999	31.3	27.2-35.4
$50,000 or more	26.4	24.4-28.5
Disability		
Living with a disability	35.5	32.6-38.5
Living without a disability	31.4	29.6-33.2
Insurance		
Uninsured	67.3	60.8-73.8
Insured	29.8	28.3-31.4

**FOBT within 1 year, or Sigmoidoscopy within 5 years with FOBT within 3 years, or Colonoscopy within 10 years (United States Preventive Services Task Force, 2008).

†Living with a disability: Respondents who have at least one of the six disability types (hearing, vision, cognition, mobility,self-care, and/or independent living).

Due to changes in BRFSS survey methodology 2011- 2018 BRFSS estimates cannot be compared with estimates from previous years. Please refer to Technical Notes for more information about BRFSS survey methodology.

Percentage of Adults Aged 50 to 75 Years Who Did Not Meet Colorectal Cancer Screening Guidelines**, KS BRFSS 2018



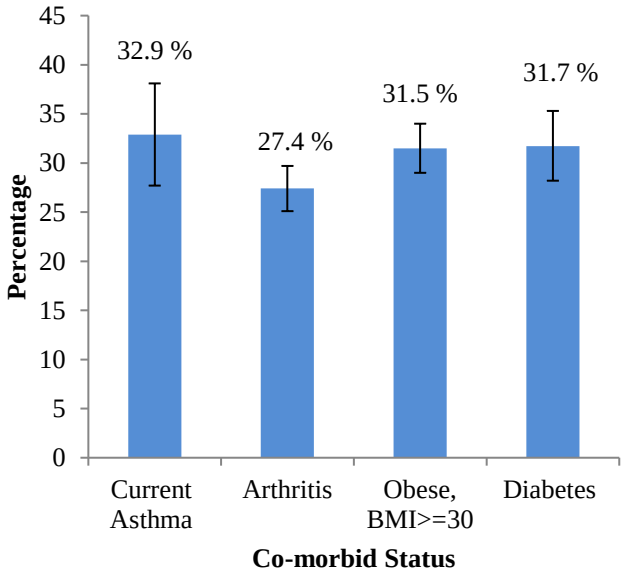
†Living with a disability: Respondents who have at least one of the six disability types (hearing, vision, cognition, mobility, self-care, and/or independent living).

Due to changes in BRFSS survey methodology 2011- 2018 BRFSS estimates cannot be compared with estimates from previous years. Please refer to Technical Notes for more information about BRFSS survey methodology.

Percentage of Adults Ages 50 to 75 Years Who Did Not Meet Colorectal Cancer Screening Guidelines by Co-Morbid Conditions, KS BRFSS 2018**

Co-Morbid Conditions		Weighted Percentage	95% CI
Current Asthma			
	Yes	32.9	27.7-38.1
	No	32.6	31.0-34.2
Arthritis			
	Yes	27.4	25.1-29.7
	No	36.2	34.1-38.3
Weight			
	Normal or Underweight, BMI<25	36.0	32.7-39.3
	Overweight, 25<= BMI<30	31.2	28.6-33.8
	Obese, BMI>=30	31.5	29.0-34.0
Diabetes			
	Yes	31.7	28.1-35.2
	No	32.9	31.2-34.6

Percentage Of Adults Aged 50-75 Years Who Were Up-To-Date With Colorectal Cancer Screening, by Co-morbid Conditions**



The percentage of Kansas adults ages 50 to 75 years who did not meet colorectal screening guidelines was significantly **higher** among:

- Adults without arthritis compared with those with arthritis

The percentage of Kansas adults ages 50 to 75 years who did not meet colorectal screening guidelines did not differ significantly by current asthma, diabetes and weight status.

SUMMARY

Approximately 33 percent of Kansas adults ages 50 to 75 years did not meet colorectal screening guidelines. In addition, higher percentages of adults ages 50-54 years, Hispanics, adults with no insurance, adults with lower income, adults with lower education, and those without arthritis did not meet colorectal screening guidelines.

The Healthy People 2020 goal is to increase the percentage of adults ages 50 to 75 who received colorectal cancer screening based on the most recent guidelines to 70.5 percent. Therefore further public health efforts are needed to reach the objective and to address disparities in population subgroups in Kansas.

Due to changes in BRFSS survey methodology 2011- 2018 BRFSS estimates cannot be compared with estimates from previous years. Please refer to Technical Notes for more information about BRFSS survey methodology.

Nutrition, Physical Activity & Obesity:

Obesity

Obesity is a complex health issue that can have a wide range of negative health outcomes associated with it, including but not limited to coronary heart disease, cancers, hypertension and sleep apnea.[10] The wide range of health consequences demonstrates the need to reach the Healthy People 2020 goal to reduce the proportion of adults who are obese.

In 2018, approximately 1 in 3 Kansas adults ages 18 years and older were obese. The percentage of Kansas adults who were obese was significantly **higher** among:

- Adults ages 25 years and older compared with adults ages 18-24 years; and adults ages 35-64 years compared with adults ages 65 years and older
- Adults with a high school graduation or G.E.D or some college education compared with college graduates
- Adults with annual household income less than $15,000 compared with adults with an annual household income greater than $35,000
- Adults living with a disability compared with adults living without a disability

The percentage Kansas adults ages 18 years and older who were obese did not differ significantly by gender, race/ethnicity groups or insurance status.

Percentage of Adults Ages 18 Years and Older Who Were Obese, KS BRFSS 2018

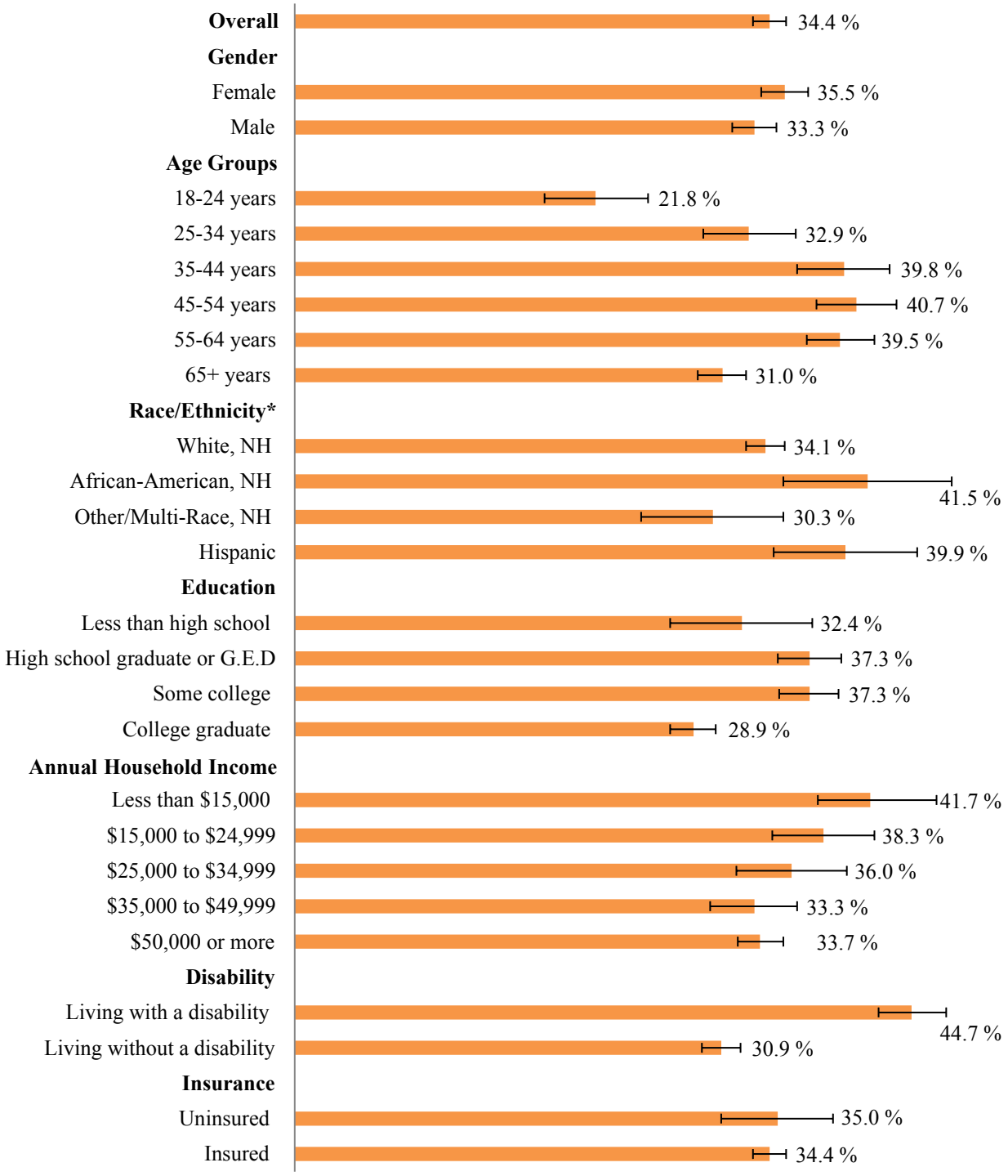
Demographic Characteristics	Weighted Percentage	95% CI
Overall	34.4	33.2-35.6
Gender		
Female	35.5	33.8-37.2
Male	33.3	31.7-34.9
Age Groups		
18-24 years	21.8	18.0-25.5
25-34 years	32.9	29.5-36.2
35-44 years	39.8	36.5-43.2
45-54 years	40.7	37.8-43.6
55-64 years	39.5	37.0-41.9
65+ years	31.0	29.3-32.8
Race/Ethnicity*		
White, NH	34.1	32.7-35.5
African-American, NH	41.5	35.4-47.6
Other/Multi-Race, NH	30.3	25.2-35.5
Hispanic	39.9	34.7-45.1
Education		
Less than high school	32.4	27.3-37.6
High school graduate or G.E.D	37.3	35.0-39.6
Some college	37.3	35.2-39.5
College graduate	28.9	27.3-30.6
Annual Household Income		
Less than $15,000	41.7	36.9-46.5
$15,000 to $24,999	38.3	34.6-42.0
$25,000 to $34,999	36.0	32.0-40.0
$35,000 to $49,999	33.3	30.2-36.5
$50,000 or more	33.7	32.0-35.3
Disability		
Living with a disability	44.7	42.2-47.1
Living without a disability	30.9	29.5-32.3
Insurance		
Uninsured	35.0	31.0-39.1
Insured	34.4	33.2-35.6

*Prevalence estimates for race and ethnicity were age-adjusted to the U.S. 2000 standard population.

†Living with a disability: Respondents who have at least one of the six disability types (hearing, vision, cognition, mobility,self-care, and/or independent living).

Due to changes in BRFSS survey methodology 2011- 2018 BRFSS estimates cannot be compared with estimates from previous years. Please refer to Technical Notes for more information about BRFSS survey methodology.

Percentage of Adults Ages 18 Years and Older Who Were Obese, KS BRFSS 2018



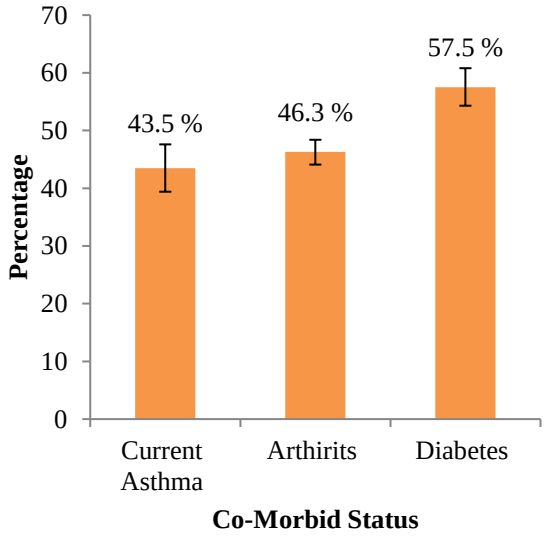
*Prevalence estimates for race and ethnicity were age-adjusted to the U.S. 2000 standard population.
†Living with a disability: Respondents who have at least one of the six disability types (hearing, vision, cognition, mobility, self-care, and/or independent living).

Due to changes in BRFSS survey methodology 2011- 2018 BRFSS estimates cannot be compared with estimates from previous years. Please refer to Technical Notes for more information about BRFSS survey methodology.

Percentage of Adults Ages 18 Years and Older Who Were Obese by Co-Morbid Conditions, KS BRFSS 2018

Co-Morbid Conditions		Weighted Percentage	95% CI
Current Asthma			
	Yes	43.5	39.4-47.6
	No	33.3	32.1-34.6
Arthritis			
	Yes	46.3	44.2-48.5
	No	30.3	29.0-31.7
Diabetes			
	Yes	57.5	54.2-60.7
	No	31.4	30.1-32.6

Percentage of Adults Ages 18 Years and Older Who Were Obese, by Co-Morbid Conditions, KS BRFSS 2018



The percentage of Kansas adults ages 18 years and older who were obese was significantly **higher** among:

- Adults with current asthma compared with those without current asthma
- Adults with arthritis compared with those without arthritis
- Adults with diabetes compared with those without diabetes

SUMMARY

Approximately 34.4 percent of Kansas adults ages18 years and older were obese. In addition, higher percentages of adults who were obese were seen among: middle aged adults, adults with income less than $15,000, adults with a high school graduation or G.E.D or some college education, adults with co-morbid conditions (current asthma, diabetes or arthritis) and adults living with a disability.

The Healthy People 2020 goal is to reduce the proportion of adults who are obese to 30.5 percent. The goal for the overall population is met in Kansas; however, overall prevalence is still high and there are disparities in population subgroups that have not met the HP 2020 target. Therefore, further public health efforts are needed to address overall prevalence and disparities in population subgroups in Kansas.

Due to changes in BRFSS survey methodology 2011- 2018 BRFSS estimates cannot be compared with estimates from previous years. Please refer to Technical Notes for more information about BRFSS survey methodology.

Nutrition, Physical Activity and Obesity:

Leisure-Time Physical Activity

Physical activity can help to improve health outcomes. People who are physically active can live longer and have a lower risk of chronic health conditions including but not limited to heart disease, depression and some cancers.[11] Thus, inactive adults have a higher risk of living unhealthy lives. The Healthy People 2020 goal is to reduce the proportion of adults who engage in no leisure-time physical activity.

In 2018, approximately 1 in 4 Kansas adults ages 18 years and older did not participate in leisure-time physical activity in the past 30 days. The percentage of Kansas adults ages 18 years and older who did not participate in leisure-time physical activity in the past 30 days was significantly **higher** among:

- Females compared with males
- Older adults compared with adults in younger age groups
- Hispanics compared with non-Hispanic whites
- Adults with lower education compared with adults in higher education groups
- Adults with lower annual household income compared with adults with higher annual household income
- Adults living with a disability compared with adults living without a disability
- Adults with no insurance compared with adults with insurance

Percentage of Adults Ages 18 Years and Older Not Participating in Leisure-Time Physical Activity in the Past 30 Days, KS BRFSS 2018

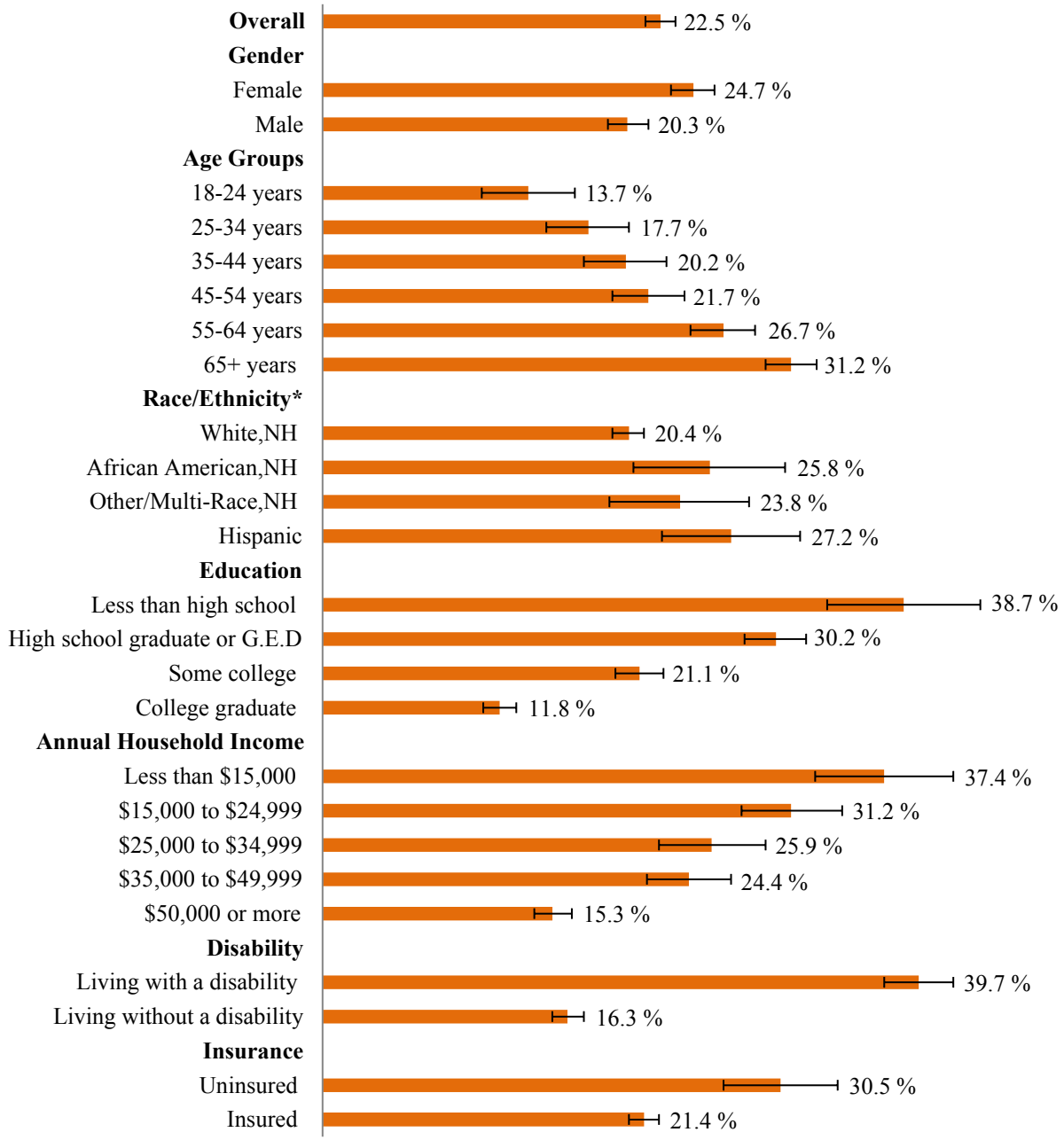
Demographic Characteristics	Weighted Percentage	95% CI
Overall	22.5	21.5-23.5
Gender		
Female	24.7	23.3-26.2
Male	20.3	18.9-21.6
Age Groups		
18-24 years	13.7	10.6-16.8
25-34 years	17.7	15.0-20.5
35-44 years	20.2	17.5-23.0
45-54 years	21.7	19.3-24.1
55-64 years	26.7	24.6-28.9
65+ years	31.2	29.5-32.9
Race/Ethnicity*		
White, NH	20.4	19.4-21.5
African-American, NH	25.8	20.8-30.9
Other/Multi-Race, NH	23.8	19.2-28.5
Hispanic	27.2	22.6-31.8
Education		
Less than high school	38.7	33.6-43.8
High school graduate or GED	30.2	28.2-32.3
Some college	21.1	19.5-22.7
College graduate	11.8	10.7-12.9
Annual Household Income		
Less than $15,000	37.4	32.8-42.0
$15,000 to $24,999	31.2	27.8-34.5
$25,000 to $34,999	25.9	22.3-29.4
$35,000 to $49,999	24.4	21.6-27.2
$50,000 or more	15.3	14.0-16.5
Disability		
Living with a disability	39.7	37.4-42.0
Living without a disability†	16.3	15.2-17.3
Insurance		
Uninsured	30.5	26.7-34.3
Insured	21.4	20.4-22.4

*Prevalence estimates for race and ethnicity were age-adjusted to the U.S. 2000 standard population.

†Living with a disability: Respondents who have at least one of the six disability types (hearing, vision, cognition, mobility,self-care, and/or independent living).

Due to changes in BRFSS survey methodology 2011- 2018 BRFSS estimates cannot be compared with estimates from previous years. Please refer to Technical Notes for more information about BRFSS survey methodology.

Percentage of Adults Ages 18 Years and Older Not Participating in Any Physical Activity Other Than Their Regular Job in the Past 30 Days, KS BRFSS 2018



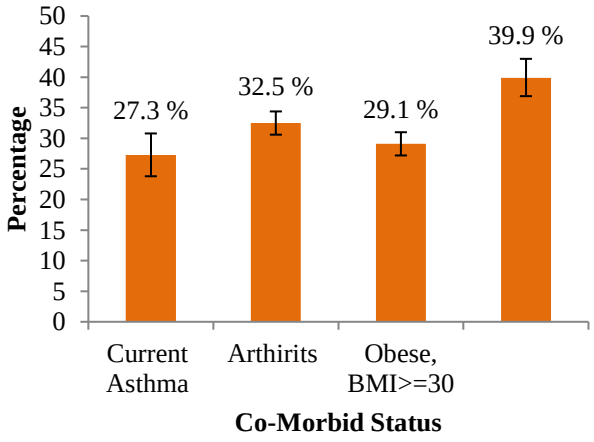
*Prevalence estimates for race and ethnicity were age-adjusted to the U.S. 2000 standard population.
†Living with a disability: Respondents who have at least one of the six disability types (hearing, vision, cognition, mobility, self-care, and/or independent living).

Due to changes in BRFSS survey methodology 2011- 2018 BRFSS estimates cannot be compared with estimates from previous years. Please refer to Technical Notes for more information about BRFSS survey methodology.

Percentage of Adults Ages 18 Years and Older Not Participating In Leisure-Time Physical Activity in the Past 30 Days by Co-Morbid Conditions, KS BRFSS 2018

Co-Morbid Conditions	Weighted Percentage	95% CI
Current Asthma		
Yes	27.3	23.8-30.8
No	22.0	20.9-23.0
Arthritis		
Yes	32.5	30.6-34.4
No	19.0	17.8-20.2
Weight		
Normal or Underweight, BMI<25	17.6	15.9-19.4
Overweight, 25<= BMI<30	19.4	17.7-21.0
Obese, BMI>=30	29.1	27.2-31.0
Diabetes		
Yes	39.9	36.8-42.9
No	20.2	19.2-21.3

Percentage of Adults Ages 18 Years and Older Not Participating in Any Physical Activity Other Than Their Regular Job in the Past 30 Days, by Co-Morbid Conditions, KS BRFSS 2018



The percentage of Kansas adults ages 18 years and older who did not participate in leisure-time physical activity in the past 30 days was significantly **higher** among:

- Adults with current asthma compared with those without current asthma
- Adults with arthritis compared with those without arthritis
- Adults who were obese compared with those who were overweight, normal weight or underweight
- Adults with diabetes compared with those without diabetes

SUMMARY

Approximately 22.5 percent of Kansas adults ages 18 years and older did not participate in leisure-time physical activity in the past 30 days. In addition, higher percentages of adults who did not participate in leisure-time physical activity in the past 30 days were seen among: females, older adults, Hispanics, non-Hispanic African-Americans, uninsured adults, adults with lower annual household income, adults with lower education, adults with no health insurance, adults with co-morbid conditions (current asthma, arthritis, diabetes or obesity), and adults living with disabilities.

The Healthy People 2020 goal is to reduce the proportion of adults who do not participate in leisure-time physical activity to 32.6 percent. While the Healthy People 2020 objective is being met, in Kansas the overall prevalence is still high and there are disparities in population subgroups that have not met the HP 2020 target. Therefore, further public health efforts are needed to address overall prevalence and disparities in population subgroups in Kansas.

Due to changes in BRFSS survey methodology 2011- 2018 BRFSS estimates cannot be compared with estimates from previous years. Please refer to Technical Notes for more information about BRFSS survey methodology.

Tobacco Use: Current Cigarette Smoking

Tobacco use is one of the most preventable causes of morbidity and mortality.[15] More deaths are caused each year by tobacco use than by all deaths from human immunodeficiency virus (HIV), illegal drug use, alcohol use, motor vehicle injuries, suicides and homicides combined.[16, 17] The Healthy People 2020 goal is to reduce smoking among adults.

Current smoking is defined as adults who have smoked 100 cigarettes in their entire life and smoke now, either every day or some days. In 2018, approximately 1 in 6 Kansas adults ages 18 years and older currently smoke cigarettes. The percentage of Kansas adults ages 18 years and older who currently smoke cigarettes was significantly **higher** among:

- Adults younger than 65 years compared with adults ages 65 years and older
- Adults with lower education compared with adults in higher education groups
- Adults with lower annual household income compared with adults in higher annual household income groups
- Adults living with a disability compared with adults living without a disability
- Adults with no insurance compared with adults with insurance

The percentage of Kansas adults ages18 years and older who currently smoke cigarettes did not differ significantly by gender, race/ethnicity groups.

Percentage of Adults Ages 18 Years and Older Who Currently Smoke Cigarettes, KS BRFSS 2018

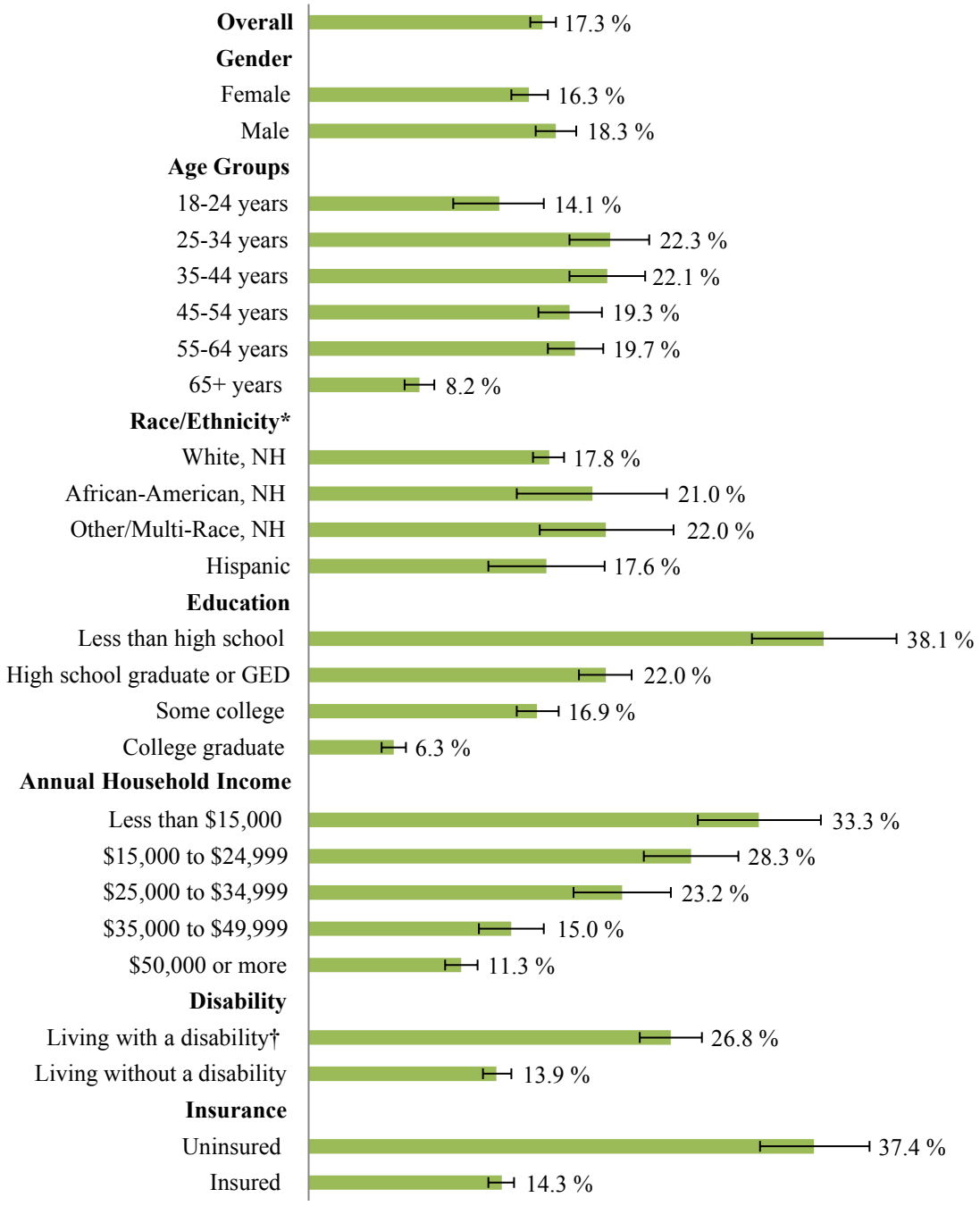
Demographic Characteristics	Weighted Percentage	95% CI
Overall	17.3	16.3-18.2
Gender		
Female	16.3	14.9-17.6
Male	18.3	16.8-19.8
Age Groups		
18-24 years	14.1	10.8-17.5
25-34 years	22.3	19.4-25.3
35-44 years	22.1	19.3-24.9
45-54 years	19.3	16.9-21.6
55-64 years	19.7	17.6-21.7
65+ years	8.2	7.1-9.3
Race/Ethnicity*		
White, NH	17.8	16.7-19.0
African-American, NH	21.0	15.5-26.6
Other/Multi-Race, NH	22.0	17.0-26.9
Hispanic	17.6	13.3-21.9
Education		
Less than high school	38.1	32.7-43.4
High school graduate or GED	22.0	20.1-24.0
Some college	16.9	15.3-18.4
College graduate	6.3	5.4-7.2
Annual Household Income		
Less than $15,000	33.3	28.7-37.8
$15,000 to $24,999	28.3	24.8-31.8
$25,000 to $34,999	23.2	19.6-26.8
$35,000 to $49,999	15.0	12.6-17.4
$50,000 or more	11.3	10.1-12.5
Disability		
Living with a disability†	26.8	24.5-29.1
Living without a disability	13.9	12.8-14.9
Insurance		
Uninsured	37.4	33.3-41.4
Insured	14.3	13.4-15.3

*Prevalence estimates for race and ethnicity were age-adjusted to the U.S. 2000 standard population.

†Living with a disability: Respondents who have at least one of the six disability types (hearing, vision, cognition, mobility,self-care, and/or independent living).

Due to changes in BRFSS survey methodology 2011- 2018 BRFSS estimates cannot be compared with estimates from previous years. Please refer to Technical Notes for more information about BRFSS survey methodology.

Percentage of Adults Ages 18 Years and Older Who Currently Smoke Cigarettes, KS BRFSS 2018



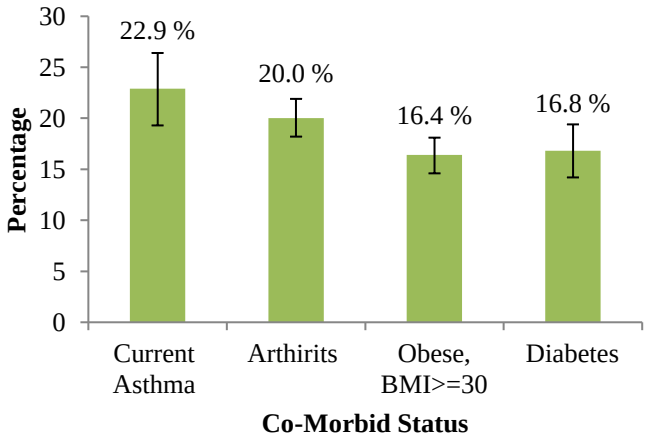
*Prevalence estimates for race and ethnicity were age-adjusted to the U.S. 2000 standard population.
†Living with a disability: Respondents who have at least one of the six disability types (hearing, vision, cognition, mobility, self-care, and/or independent living).

Due to changes in BRFSS survey methodology 2011- 2018 BRFSS estimates cannot be compared with estimates from previous years. Please refer to Technical Notes for more information about BRFSS survey methodology.

Percentage of Adults Ages 18 Years and Older Who Currently Smoke Cigarettes by Co-Morbid Conditions, KS BRFSS 2018

Co-Morbid Conditions	Weighted Percentage	95% CI
Current Asthma Status		
Yes	22.9	19.4-26.5
No	16.5	15.5-17.6
Arthritis Status		
Yes	20.0	18.1-21.8
No	16.3	15.1-17.5
Weight Category		
Normal or Underweight, BMI<25	20.6	18.6-22.5
Overweight, 25<= BMI<30	15.7	14.1-17.4
Obese, BMI>=30	16.4	14.7-18.2
Diabetes Status		
Yes	16.8	14.2-19.4
No	17.3	16.2-18.4

Percentage of Adults Ages 18 Years and Older Who Currently Smoke Cigarettes, by Co-Morbid Conditions, KS BRFSS 2018



The percentage of Kansas adults ages18 years and older who currently smoke cigarettes was significantly **higher** among:

- Adults with current asthma compared with those without current asthma
- Adults with arthritis compared with those without arthritis
- Adults who were normal or underweight compared with those who were overweight or obese

The percentage of Kansas adults ages18 years and older who currently smoke cigarettes did not differ significantly by diabetes status.

SUMMARY

About 17.3 percent of Kansas adults ages 18 years and older currently smoke cigarettes. In addition, higher percentages of adults who currently smoke cigarettes were seen among: males, adults younger than 65, uninsured adults, adults with lower income and education, adults with co-morbid conditions (current asthma or arthritis), those living with a disability, those who are normal or underweight weight category and those without diabetes.

The Healthy People 2020 goal is to reduce smoking by adults to 12 percent. Therefore, further public health efforts are needed to reach the objective and to address disparities in population subgroups in Kansas.

Due to changes in BRFSS survey methodology 2011- 2018 BRFSS estimates cannot be compared with estimates from previous years. Please refer to Technical Notes for more information about BRFSS survey methodology.

Tobacco Use: Smokeless Tobacco

Smokeless tobacco causes a number of serious oral health problems, including cancer of the mouth and gums, periodontal disease and tooth loss.[18] The Healthy People 2020 goal is to reduce the use of smokeless tobacco products by adults.

A smokeless tobacco user is defined as an adult who currently uses chewing tobacco, snuff or snus (Swedish for snuff) some days or every day. In 2018, approximately 1 in 17 Kansas adults ages 18 years and older were currently using any smokeless tobacco product. The percentage of Kansas adults ages 18 years and older who currently use any smokeless tobacco products was significantly **higher** among:

- Males compared with females
- Adults ages 54 years and younger compared with adults ages 55 years and older
- Non-Hispanic whites compared with Hispanics (age-adjusted prevalence)
- Adults who were not college graduates compared with those who were college graduates

The percentage of Kansas adults ages 18 years and older who currently use any smokeless tobacco products did not differ significantly by annual household income, living with a disability status or insurance status.

Percentage of Adults Ages 18 Years and Older Who Currently Use Any Smokeless Tobacco Products, KS BRFSS 2018

Demographic Characteristics	Weighted Percentage	95% CI
Overall	5.8	5.2-6.4
Gender		
Female	0.7	0.4-1.0
Male	11.0	9.9-12.2
Age Groups		
18-24 years	7.1	5.0-9.2
25-34 years	9.3	7.3-11.3
35-44 years	6.0	4.5-7.5
45-54 years	6.6	5.3-8.0
55-64 years	4.2	3.2-5.1
65+ years	2.7	2.1-3.4
Race/Ethnicity*		
White, NH	6.7	6.0-7.5
African-American, NH	**	**
Other/Multi-Race, NH	5.1	2.6-7.6
Hispanic	3.7	1.9-5.5
Education		
Less than high school	7.3	4.8-9.8
High school graduate or G.E.D	7.1	5.8-8.4
Some college	6.4	5.3-7.4
College graduate	3.4	2.7-4.1
Annual Household Income		
Less than $15,000	6.3	4.1-8.6
$15,000 to $24,999	5.1	3.5-6.7
$25,000 to $34,999	4.6	3.0-6.1
$35,000 to $49,999	6.0	4.2-7.9
$50,000 or more	6.5	5.6-7.4
Disability		
Living with a disability†	6.1	4.9-7.3
Living without a disability	5.7	5.0-6.4
Insurance		
Uninsured	7.0	5.1-8.9
Insured	5.6	5.0-6.2

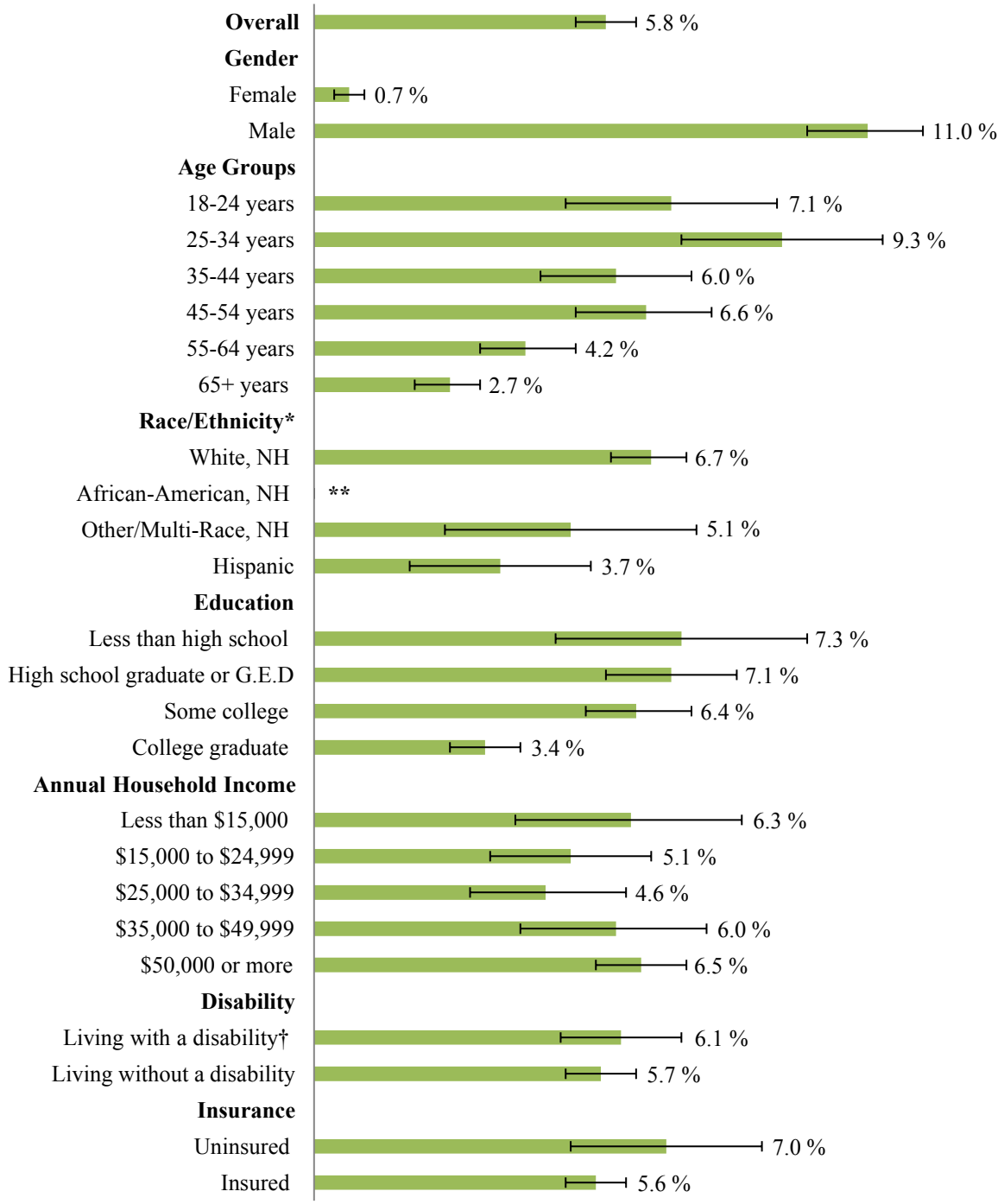
*Prevalence estimates for race and ethnicity were age-adjusted to the U.S. 2000 standard population.

** Insufficient sample and/or statistically unreliable estimate.

†Living with a disability: Respondents who have at least one of the six disability types (hearing, vision, cognition, mobility,self-care, and/or independent living).

Due to changes in BRFSS survey methodology 2011- 2018 BRFSS estimates cannot be compared with estimates from previous years. Please refer to Technical Notes for more information about BRFSS survey methodology.

Percentage of Adults Ages 18 Years and Older Who Currently Use Any Smokeless Tobacco Products, KS BRFSS 2018



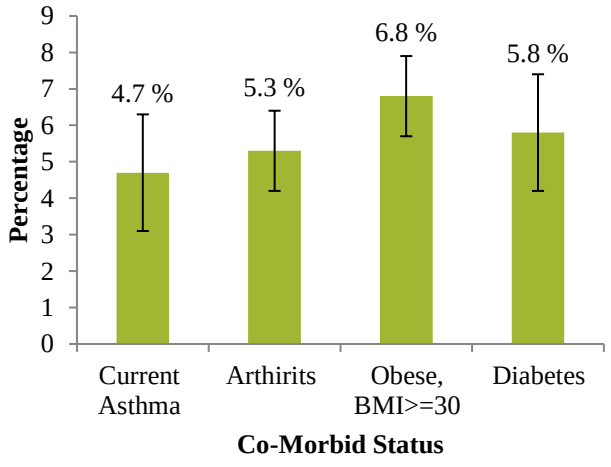
*Prevalence estimates for race and ethnicity were age-adjusted to the U.S. 2000 standard population.
†Living with a disability: Respondents who have at least one of the six disability types (hearing, vision, cognition, mobility, self-care, and/or independent living).

Due to changes in BRFSS survey methodology 2011- 2018 BRFSS estimates cannot be compared with estimates from previous years. Please refer to Technical Notes for more information about BRFSS survey methodology.

Percentage of Adults Ages 18 Years and Older Who Currently Use Any Smokeless Tobacco Products by Co-Morbid Conditions, KS BRFSS 2018

Co-Morbid Conditions		Weighted Percentage	95% CI
Current Asthma			
	Yes	4.7	3.1-6.3
	No	5.9	5.3-6.5
Arthritis			
	Yes	5.3	4.2-6.4
	No	6.0	5.3-6.7
Weight			
	Normal or Underweight, BMI<25	4.6	3.5-5.6
	Overweight, 25<= BMI<30	6.6	5.5-7.7
	Obese, BMI>=30	6.8	5.7-7.9
Diabetes			
	Yes	5.8	4.2-7.4
	No	5.8	5.2-6.4

Percentage of Adults Ages 18 Years and Older Who Currently Use Any Smokeless Tobacco Products, by Co-Morbid Conditions, KS BRFSS 2018



The percentage of Kansas adults ages 18 years and older who currently use any smokeless tobacco products was significantly **higher** among:

- Adults who were obese compared with adults who were normal or underweight

The percentage of Kansas adults who currently use any smokeless tobacco products did not differ significantly by current asthma, arthritis status or diabetes.

SUMMARY

Approximately 5.8 percent of Kansas adults ages 18 years and older were current smokeless tobacco product users. In addition, higher percentages of adults who were currently using any smokeless tobacco products were seen among: males, adults ages 54 years and younger, non-Hispanic whites, education level groups lower than college graduate, adults with obesity or those without diabetes.

The Healthy People 2020 goal is to reduce the use of smokeless tobacco products by adults to 0.2 percent. Therefore, further public health efforts are needed to reach the objective and to address disparities in population subgroups in Kansas.

Due to changes in BRFSS survey methodology 2011- 2018 BRFSS estimates cannot be compared with estimates from previous years. Please refer to Technical Notes for more information about BRFSS survey methodology.

Tobacco Use: Electronic Cigarettes

Electronic cigarettes or e-cigarettes are battery-powered devices that provide doses of nicotine and other additives to the user in an aerosol. It has been determined that E-cigarettes are not safe for youth, young adults, pregnant women, or adults who do not currently use tobacco products. E-cigarettes release nicotine when inhaled and nicotine has been linked to adverse effects on adolescent brain develop that may result in lasting deficits in cognitive function and is addictive and toxic to developing fetuses.[19]

In 2018, approximately 1 in 18 Kansas adults ages 18 years and older who currently use Electronic Cigarettes or E-Cigarettes. The percentage of Kansas adults ages 18 years and older who currently use Electronic Cigarettes or E-Cigarettes was significantly **higher** among:

- Adults ages 34 years and younger compared with adults ages 45 years and older
- Adults who were not college graduates compared with those who were college graduates
- Adults with an annual household income of less than $35,000 compared with adults with an annual household income of $50,000 or more
- Adults with no insurance compared with adults with insurance

The percentage of Kansas adults ages 18 years and older who currently use Electronic Cigarettes or E-Cigarettes did not differ significantly by gender, race/ethnicity groups or living with a disability status.

Percentage of Adults Ages 18 Years and Older Who Currently Use Electronic Cigarettes or E-Cigarettes, KS BRFSS 2018‡

Demographic Characteristics	Weighted Percentage	95% CI
Overall	5.5	4.6-6.4
Gender		
Female	4.4	3.3-5.5
Male	6.6	5.2-8.0
Age Groups		
18-24 years	12.5	8.4-16.6
25-34 years	9.3	6.6-12.0
35-44 years	5.1	3.1-7.1
45-54 years	3.6	2.1-5.1
55-64 years	3.8	2.3-5.4
65+ years	0.9	0.4-1.4
Race/Ethnicity*		
White, NH	6.6	5.4-7.7
African-American, NH	**	**
Other/Multi-Race, NH	**	**
Hispanic	**	**
Education		
Less than high school	8.8	4.5-13.2
High school graduate or G.E.D	5.6	4.0-7.1
Some college	7.4	5.6-9.1
College graduate	2.0	1.2-2.7
Annual Household Income		
Less than $15,000	8.2	4.0-12.4
$15,000 to $24,999	8.3	5.1-11.5
$25,000 to $34,999	8.8	4.9-12.8
$35,000 to $49,999	5.5	3.0-7.9
$50,000 or more	3.5	2.5-4.6
Disability		
Living with a disability†	7.5	5.5-9.6
Living without a disability	4.8	3.8-5.7
Insurance		
Uninsured	10.4	6.7-14.0
Insured	4.7	3.9-5.6

‡In 2018, Respondents who ever used e-cigarettes or other electronic vaping products were asked if now they currently use e-cigarettes or other electronic vaping products.

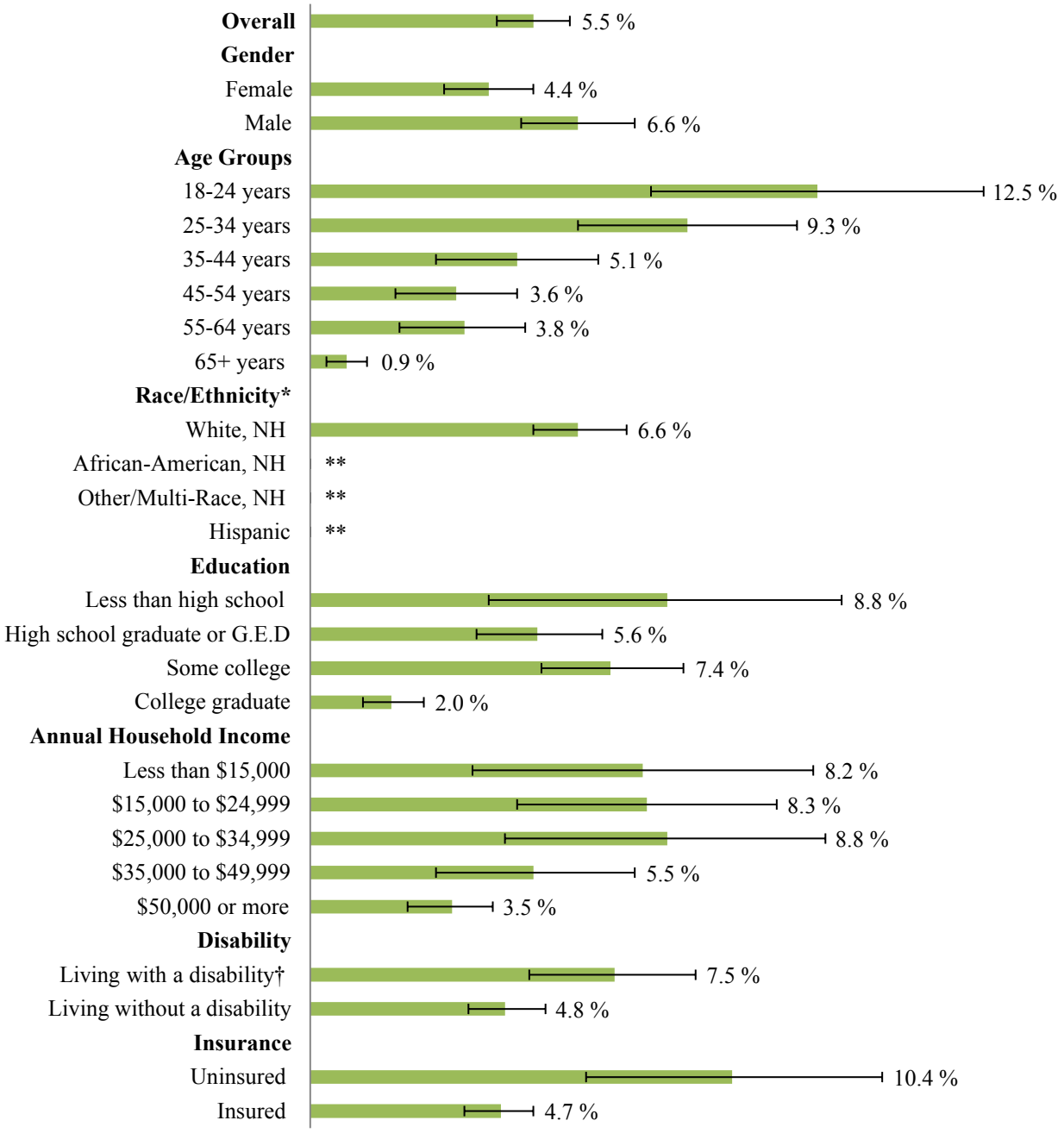
*Prevalence estimates for race and ethnicity were age-adjusted to the U.S. 2000 standard population.

** Insufficient sample and/or statistically unreliable estimate.

†Living with a disability: Respondents who have at least one of the six disability types (hearing, vision, cognition, mobility,self- care, and/or independent living).

Due to changes in BRFSS survey methodology 2011- 2018 BRFSS estimates cannot be compared with estimates from previous years. Please refer to Technical Notes for more information about BRFSS survey methodology.

Percentage of Adults Ages 18 Years and Older Who Currently Use Electronic Cigarettes or E-Cigarettes, KS BRFSS 2018‡



‡In 2018, Respondents who ever used e-cigarettes or other electronic vaping products were asked if now they currently use e-igarettes or other electronic vaping products.
*Prevalence estimates for race and ethnicity were age-adjusted to the U.S. 2000 standard population.
†Living with a disability: Respondents who have at least one of the six disability types (hearing, vision, cognition, mobility, self-care, and/or independent living).

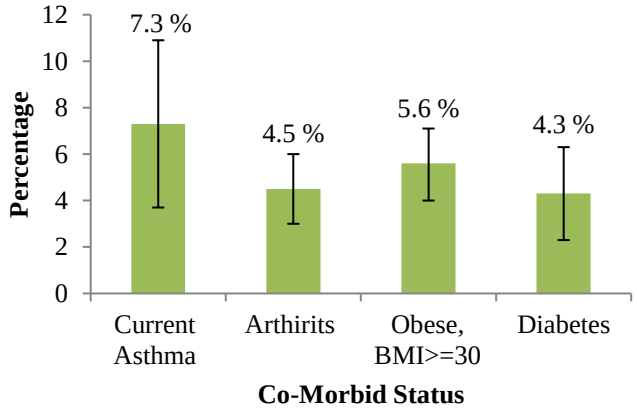
Due to changes in BRFSS survey methodology 2011- 2018 BRFSS estimates cannot be compared with estimates from previous years. Please refer to Technical Notes for more information about BRFSS survey methodology.

Percentage of Adults Ages 18 Years and Older Who Currently Use Electronic Cigarettes or E-Cigarettes by Co-Morbid Conditions, KS BRFSS 2018‡

Co-Morbid Conditions	Weighted Percentage	95% CI
Current Asthma		
Yes	7.3	3.7-10.9
No	5.1	4.3-6.0
Arthritis		
Yes	4.5	3.0-6.0
No	5.7	4.7-6.8
Weight		
Normal or Underweight, BMI<25	7.1	5.2-9.0
Overweight, 25<= BMI<30	4.2	2.9-5.5
Obese, BMI>=30	5.6	4.1-7.2
Diabetes		
Yes	4.3	2.3-6.3
No	5.6	4.7-6.6

‡In 2018, Respondents who ever used e-cigarettes or other electronic vaping products were asked if now they currently use e-cigarettes or other electronic vaping products.

Percentage of Adults Ages 18 Years and Older Who Currently Use Electronic Cigarettes or E-Cigarettes by Co-Morbid Conditions, KS BRFSS 2018‡



‡In 2018, Respondents who ever used e-cigarettes or other electronic vaping products were asked if now they currently use e-igarettes or other electronic vaping products.

The percentage of Kansas adults ages 18 years and older who currently use e-cigarettes did not differ significantly by current asthma status, arthritis status, diabetes status or weight category.

SUMMARY

Approximately 5.5 percent of Kansas adults ages 18 years and older who currently use e-cigarettes. In addition, higher percentages of adults who currently use e-cigarettes were seen among: males, adults ages 34 years and younger, adults with less than a college graduation, adults with an annual household income of less than $35,000, or uninsured adults.

Therefore, further public health efforts are needed to reduce e-cigarette use and to address disparities in population subgroups in Kansas.

Due to changes in BRFSS survey methodology 2011- 2018 BRFSS estimates cannot be compared with estimates from previous years. Please refer to Technical Notes for more information about BRFSS survey methodology.

Oral Health: Oral Health Care System

Oral health is an essential and integral component of overall health throughout life. The word oral refers to the whole mouth, including the teeth, gums, hard and soft palate, linings of the mouth and throat, tongue, lips, salivary glands, chewing muscles, and upper and lower jaws. Regular check-ups are essential for detecting early signs of oral health problems that can then lead to early prevention and treatment of problems.[19] The Healthy People 2020 goal is to increase the proportion of adults who used the oral health care system in the past year.

In 2018, approximately 1 in 3 Kansas adults ages 18 years and older did not use the oral health care system in the past 12 months. The percentage of Kansas adults ages 18 years and older who did not use the oral health care system in the past 12 months was significantly **higher** among:

- Males compared with females
- Adults ages 25 to 34 years compared with adults ages 45 to 54 years and 65 years and older
- Non-Hispanic other/multi-race adults compared with non-Hispanic whites (age-adjusted prevalence)
- Adults with lower education compared with adults in higher education groups
- Adults with lower annual household income compared with adults in higher annual household income groups
- Adults living with a disability compared with adults living without a disability
- Adults with no insurance compared with adults with insurance

Percentage of Adults Ages 18 Years and Older Who Have Not Used the Oral Health Care System in the Past 12 Months, KS BRFSS 2018

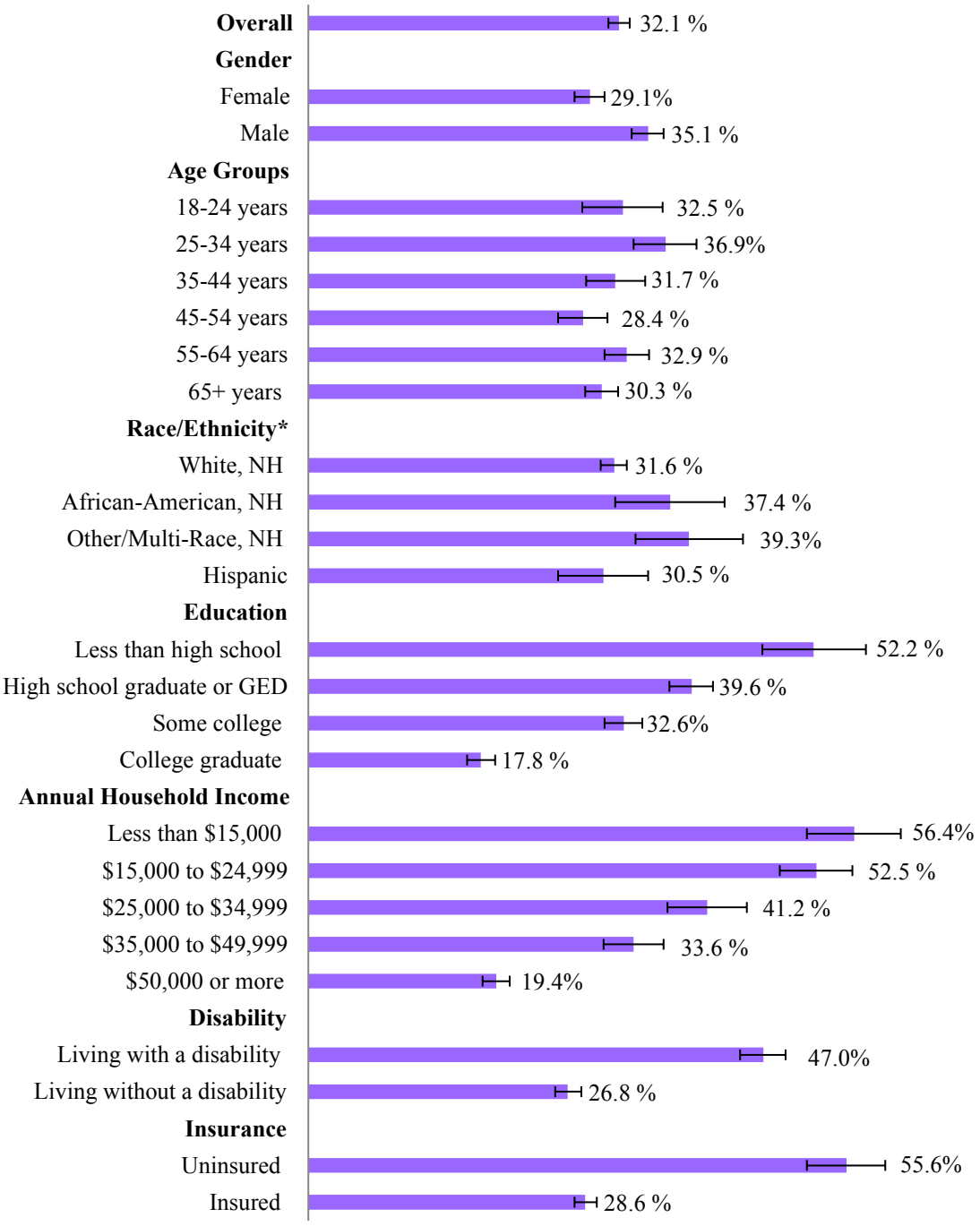
Demographic Characteristics	Weighted Percentage	95% CI
Overall	32.1	31.0-33.2
Gender		
Female	29.1	27.6-30.7
Male	35.1	33.5-36.8
Age Groups		
18-24 years	32.5	28.4-36.7
25-34 years	36.9	33.7-40.2
35-44 years	31.7	28.6-34.7
45-54 years	28.4	25.9-31.0
55-64 years	32.9	30.6-35.2
65+ years	30.3	28.6-32.0
Race/Ethnicity*		
White, NH	31.6	30.3-33.0
African-American, NH	37.4	31.8-43.1
Other/Multi-Race, NH	39.3	33.7-44.8
Hispanic	30.5	25.9-35.2
Education		
Less than high school	52.2	46.8-57.5
High school graduate or GED	39.6	37.4-41.9
Some college	32.6	30.7-34.6
College graduate	17.8	16.3-19.2
Annual Household Income		
Less than $15,000	56.4	51.6-61.3
$15,000 to $24,999	52.5	48.8-56.3
$25,000 to $34,999	41.2	37.1-45.3
$35,000 to $49,999	33.6	30.5-36.7
$50,000 or more	19.4	18.0-20.8
Disability		
Living with a disability	47.0	44.7-49.4
Living without a disability	26.8	25.4-28.1
Insurance		
Uninsured	55.6	51.6-59.7
Insured	28.6	27.4-29.7

*Prevalence estimates for race and ethnicity were age-adjusted to the U.S. 2000 standard population.

†Living with a disability: Respondents who have at least one of the six disability types (hearing, vision, cognition, mobility,self-care, and/or independent living).

Due to changes in BRFSS survey methodology 2011- 2018 BRFSS estimates cannot be compared with estimates from previous years. Please refer to Technical Notes for more information about BRFSS survey methodology.

Percentage of Adults Aged 18 Years and Older Who Have Not Used the Oral Health Care System in the Past 12 Months, KS BRFSS 2018



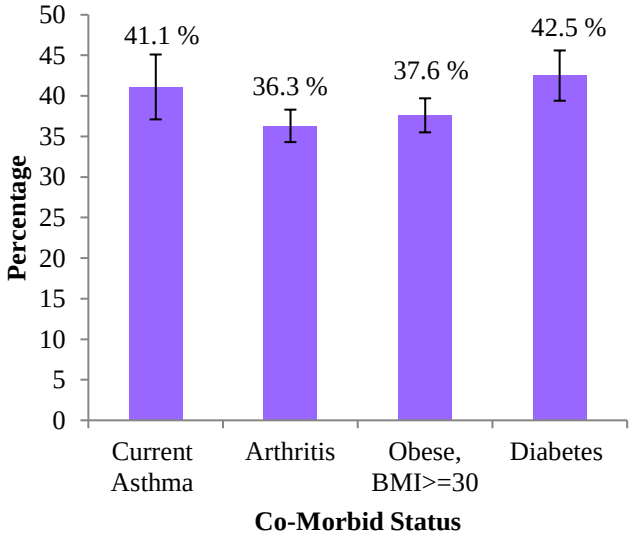
*Prevalence estimates for race and ethnicity were age-adjusted to the U.S. 2000 standard population.
†Living with a disability: Respondents who have at least one of the six disability types (hearing, vision, cognition, mobility, self-care, and/or independent living).

Due to changes in BRFSS survey methodology 2011- 2018 BRFSS estimates cannot be compared with estimates from previous years. Please refer to Technical Notes for more information about BRFSS survey methodology.

Percentage of Adults Ages 18 Years and Older Who Have Not Used the Oral Health Care System in the Past 12 Months by Co-Morbid Conditions, KS BRFSS 2018

Co-Morbid Conditions	Weighted Percentage	95% CI
Current Asthma		
Yes	41.1	37.1-45.1
No	30.8	29.6-32.0
Arthritis		
Yes	36.3	34.3-38.3
No	30.5	29.1-31.9
Weight		
Normal or Underweight, BMI<25	29.7	27.5-31.8
Overweight, 25<= BMI<30	28.6	26.6-30.5
Obese, BMI>=30	37.6	35.5-39.7
Diabetes		
Yes	42.5	39.4-45.6
No	30.7	29.5-32.0

Percentage of Adults Aged 18 Years and Older Who Have Not Used the Oral Health Care System in the Past 12 Months, by Co-Morbid Conditions, KS BRFSS 2018



The percentage of Kansas adults aged 18 years and older who did not use the oral health care system in the past 12 months was significantly **higher** among:

- Adults with current asthma compared with those without current asthma
- Adults with arthritis compared with those without arthritis
- Adults with diabetes compared with those without diabetes
- Adults who were obese compared adults who were overweight, normal weight or underweight

SUMMARY

Approximately 32 percent of Kansas adults ages 18 years and older did not use the oral health care system in the past 12 months. In addition, higher percentages of adults who did not use the oral health care system in the past 12 months were seen among: males, adults ages 24 to 34 years, non-Hispanic other/multi-race adults, uninsured adults, adults with lower income and education, adults with co-morbid conditions (current asthma, diabetes, arthritis or obesity) and those living with a disability.

To address associated disparities with accessing the oral health care system, further public health efforts are needed in Kansas.

Due to changes in BRFSS survey methodology 2011- 2018 BRFSS estimates cannot be compared with estimates from previous years. Please refer to Technical Notes for more information about BRFSS survey methodology.

Oral Health: Lost All Permanent Teeth

Loss of all permanent teeth indicates poor oral health. Oral infections that may cause tooth loss such as periodontal (gum) diseases may increase the risk of heart disease, may put pregnant women at greater risk of premature delivery, and may complicate control of blood sugar for people living with diabetes.[19] Thus preventing loss of teeth is the major step in the health of the person. The Healthy People 2020 goal is reduce the proportion of adults ages 65 to 74 years who have lost all their natural teeth.

In 2018, approximately 1 in 9 Kansas adults ages 65 to 74 years have lost all their permanent teeth. The percentage of Kansas adults ages 65 to 74 years who have lost all their permanent teeth was significantly **higher** among:

- Adults with lower education compared with adults in higher education groups
- Adults with lower annual household income compared with adults in higher annual household income groups
- Adults living with a disability compared with adults living without a disability
- Adults with no insurance compared with adults with insurance

The percentage of Kansas adults ages 65 to 74 years who have lost all their permanent teeth did not differ significantly by gender, or race/ethnicity groups.

Percentage of Adults Ages 65 to 74 Years Who Have Lost All Their Permanent Teeth, KS BRFSS 2018

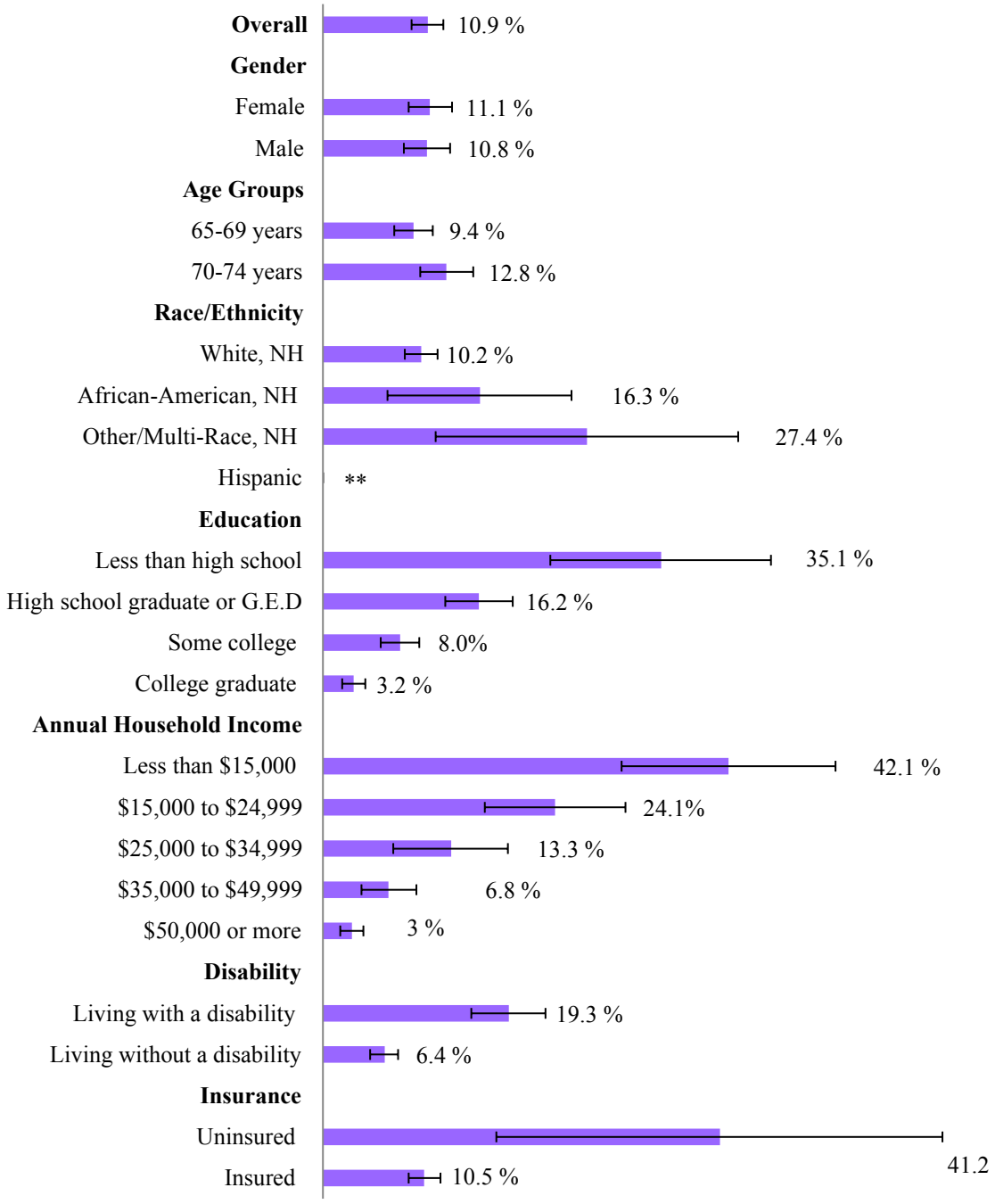
Demographic Characteristics	Weighted Percentage	95% CI
Overall	10.9	9.3-12.6
Gender		
Female	11.1	8.8-13.3
Male	10.8	8.4-13.2
Age Groups		
65-69 years	9.4	7.4-11.4
70-74 years	12.8	10.0-15.5
Race/Ethnicity		
White, NH	10.2	8.5-11.9
African-American, NH	16.3	6.8-25.9
Other/Multi-Race, NH	27.4	11.7-43.1
Hispanic	**	**
Education		
Less than high school	35.1	23.7-46.6
High school graduate or GED	16.2	12.7-19.7
Some college	8.0	6.0-10.0
College graduate	3.2	2.0-4.4
Annual Household Income		
Less than $15,000	42.1	31.0-53.2
$15,000 to $24,999	24.1	16.8-31.4
$25,000 to $34,999	13.3	7.4-19.3
$35,000 to $49,999	6.8	3.9-9.6
$50,000 or more	3.0	1.8-4.2
Disability		
Living with a disability	19.3	15.5-23.2
Living without a disability	6.4	5.0-7.9
Insurance		
Uninsured	41.2	18.1-64.4
Insured	10.5	8.8-12.1

** Insufficient sample and/or statistically unreliable estimate.

†Living with a disability: Respondents who have at least one of the six disability types (hearing, vision, cognition, mobility,self-care, and/or independent living).

Due to changes in BRFSS survey methodology 2011- 2018 BRFSS estimates cannot be compared with estimates from previous years. Please refer to Technical Notes for more information about BRFSS survey methodology.

Percentage of Adults Aged 65 to 74 Years Who Have Lost All Their Permanent Teeth, KS BRFSS 2018

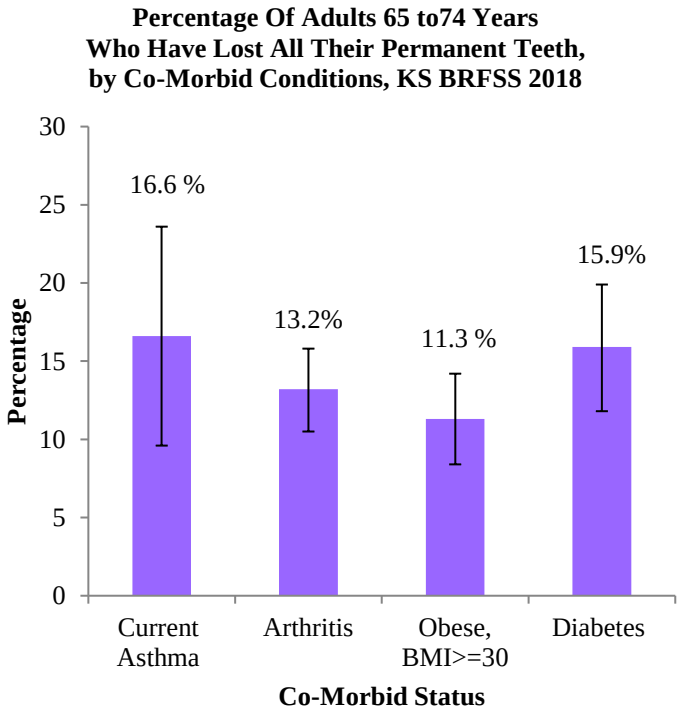


** Insufficient sample and/or statistically unreliable estimate.
†Living with a disability: Respondents who have at least one of the six disability types (hearing, vision, cognition, mobility, self-care, and/or independent living).

Due to changes in BRFSS survey methodology 2011- 2018 BRFSS estimates cannot be compared with estimates from previous years. Please refer to Technical Notes for more information about BRFSS survey methodology.

Percentage of Adults Ages 65 to 74 Years Who Have Lost All Their Permanent Teeth by Co-Morbid Conditions, KS BRFSS 2018

Co-Morbid Conditions		Weighted Percentage	95% CI
Current Asthma			
	Yes	16.6	9.6-23.6
	No	10.4	8.7-12.1
Arthritis			
	Yes	13.2	10.6-15.9
	No	8.8	6.8-10.9
Weight			
	Normal or Underweight, BMI<25	12.4	8.4-16.3
	Overweight, 25<= BMI<30	9.3	6.8-11.9
	Obese, BMI>=30	11.3	8.4-14.2
Diabetes			
	Yes	15.9	11.9-20.0
	No	9.2	7.5-10.9



The percentage of Kansas adults ages 65 to 74 years who have lost all their permanent teeth was significantly **higher** among:

- Adults with diabetes compared with those without diabetes

The percentage of Kansas adults ages 65 to 74 years who have lost all their permanent teeth did not differ significantly by current asthma, arthritis or weight status.

SUMMARY

Approximately 11 percent of Kansas adults ages 65 to 74 years have lost all their permanent teeth. In addition, higher percentages of adults who have lost all their permanent teeth were seen among: adults with lower income and education, adults living with a disability, adults with no insurance and those with diabetes.

The Healthy People 2020 goal is to reduce the proportion of adults ages 65 to 74 years who have lost all their natural teeth to 21.6 percent. While overall Kansans ages 65 to 74 years are meeting the Healthy People 2020 goal, the overall prevalence is still high and there are disparities in population subgroups that have not met the HP 2020 target. Therefore further public health efforts are needed to address overall prevalence and disparities in population subgroups in Kansas.

Due to changes in BRFSS survey methodology 2011- 2018 BRFSS estimates cannot be compared with estimates from previous years. Please refer to Technical Notes for more information about BRFSS survey methodology.

Substance Abuse: Binge Drinking

Alcohol consumption is the third leading preventable cause of death in the U.S.[22] Binge drinking is defined as adult males having five or more drinks on one occasion and adult females having four or more drinks on one occasion in the past 30 days. Binge drinking is associated with alcohol poisoning, unintentional injuries, suicide and hypertension, among other health outcomes.[23] The Healthy People 2020 goal is to reduce the proportion of adults engaging in binge drinking during the past 30 days.

In 2018, approximately 1 in 6 Kansas adults ages 18 years and older were binge drinkers. The percentage of Kansas adults ages 18 years and older who were binge drinkers was significantly **higher** among:

- Males compared with females
- Younger adults compared with older adults
- Non-Hispanic whites compared with non-Hispanic African-Americans or non-Hispanic other/multi-race adults (age-adjusted prevalence)
- Adults with an annual household income of $50,000 or more compared with adults with an annual household income of less than $15,000
- Adults living without a disability compared with adults living with a disability

The percentage of Kansas adults ages 18 years and older who were binge drinkers did not differ significantly by education groups or insurance status.

Percentage of Adults Ages 18 Years and Older Who Were Binge Drinkers, KS BRFSS 2018‡

Demographic Characteristics	Weighted Percentage	95% CI
Overall	15.8	14.8-16.7
Gender		
Female	10.7	9.6-11.9
Male	21.0	19.5-22.5
Age Groups		
18-24 years	25.3	21.4-29.1
25-34 years	24.5	21.6-27.4
35-44 years	20.6	17.8-23.4
45-54 years	15.3	13.3-17.3
55-64 years	10.6	9.2-12.1
65+ years	3.7	3.0-4.4
Race/Ethnicity*		
White, NH	18.2	17.0-19.3
African-American, NH	9.6	6.0-13.2
Other/Multi-Race, NH	9.5	6.3-12.7
Hispanic	16.6	12.7-20.4
Education		
Less than high school	12.5	8.5-16.5
High school graduate or G.E.D	15.4	13.6-17.2
Some college	16.9	15.1-18.6
College graduate	16.0	14.5-17.4
Annual Household Income		
Less than $15,000	12.9	9.2-16.5
$15,000 to $24,999	16.2	13.1-19.3
$25,000 to $34,999	14.9	11.5-18.2
$35,000 to $49,999	14.2	11.7-16.8
$50,000 or more	18.6	17.2-20.0
Disability		
Living with a disability†	12.4	10.6-14.2
Living without a disability	17.0	15.9-18.1
Insurance		
Uninsured	17.9	14.6-21.1
Insured	15.4	14.4-16.4

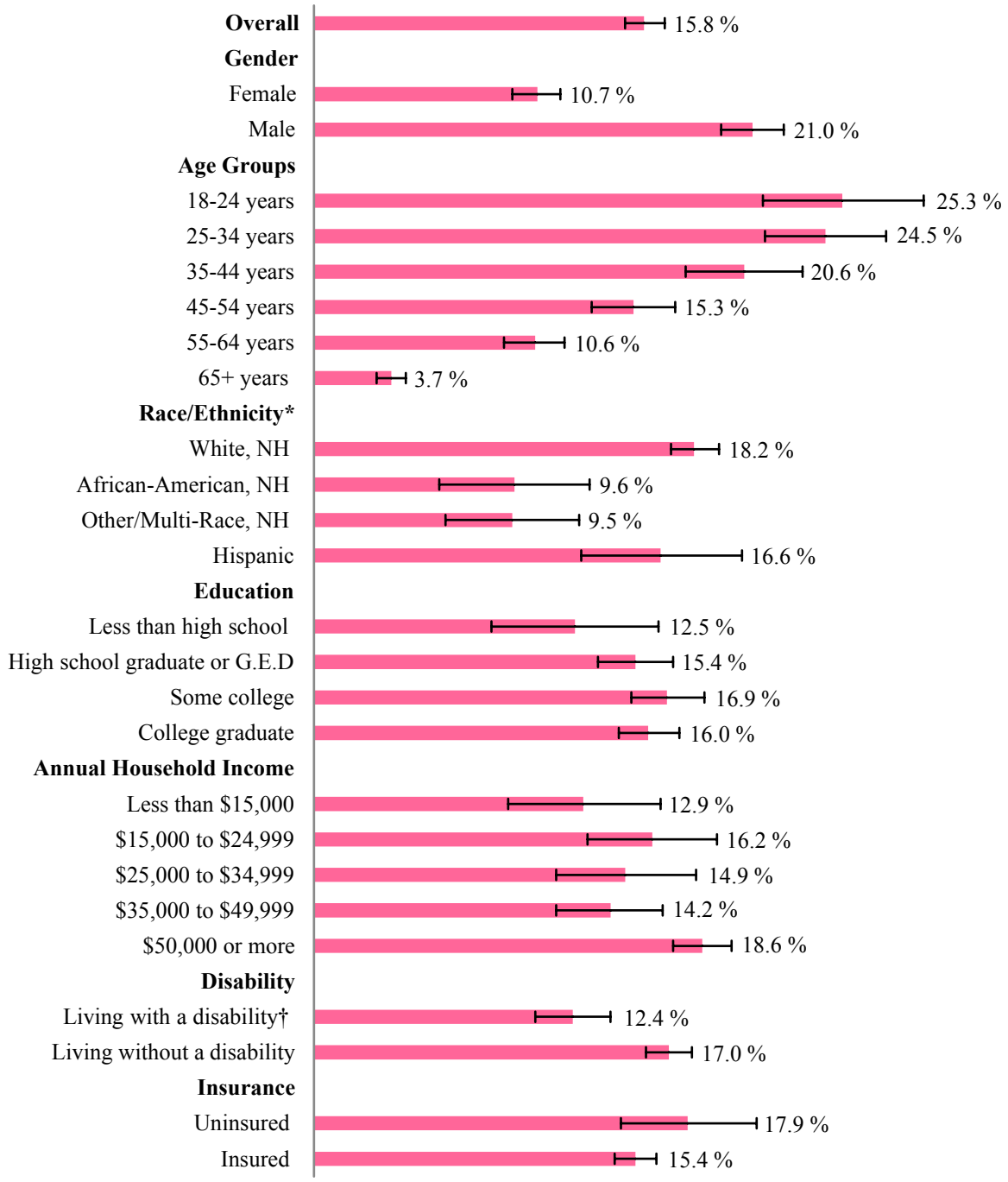
‡ Binge drinkers are defined as males having five or more drinks or females having four or more drinks on one occasion in the past 30 days.

*Prevalence estimates for race and ethnicity were age-adjusted to the U.S. 2000 standard population.

†Living with a disability: Respondents who have at least one of the six disability types (hearing,vision, cognition, mobility,self-care, and/or independent living).

Due to changes in BRFSS survey methodology 2011- 2018 BRFSS estimates cannot be compared with estimates from previous years. Please refer to Technical Notes for more information about BRFSS survey methodology.

Percentage of Adults Ages 18 Years and Older Who Were Binge Drinkers, KS BRFSS 2018‡



‡ Binge drinkers are defined as males having five or more drinks or females having four or more drinks on one occasion in the past 30 days.
*Prevalence estimates for race and ethnicity were age-adjusted to the U.S. 2000 standard population.
†Living with a disability: Respondents who have at least one of the six disability types (hearing, vision, cognition, mobility, self-care, and/or independent living).

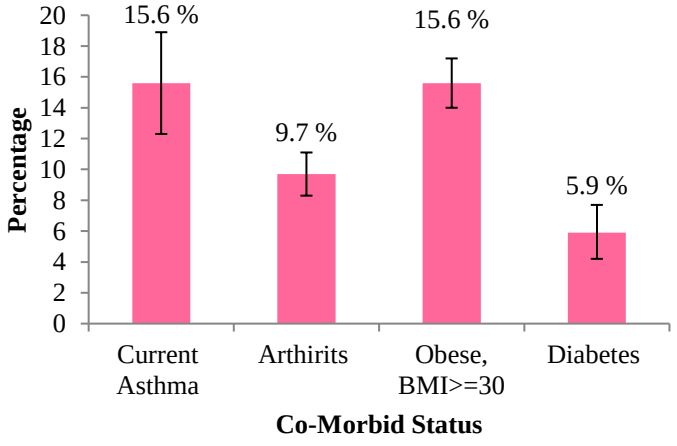
Due to changes in BRFSS survey methodology 2011- 2018 BRFSS estimates cannot be compared with estimates from previous years. Please refer to Technical Notes for more information about BRFSS survey methodology.

Percentage of Adults Ages 18 Years and Older Who Were Binge Drinkers by Co-Morbid Conditions, KS BRFSS 2018‡

Co-Morbid Conditions		Weighted Percentage	95% CI
Current Asthma			
	Yes	15.6	12.3-18.9
	No	15.8	14.8-16.8
Arthritis			
	Yes	9.7	8.3-11.1
	No	18.0	16.8-19.2
Weight			
	Normal or Underweight, BMI<25	15.0	13.3-16.8
	Overweight, 25<= BMI<30	18.6	16.8-20.4
	Obese, BMI>=30	15.6	14.0-17.2
Diabetes			
	Yes	5.9	4.1-7.6
	No	17.1	16.1-18.2

‡ Binge drinkers are defined as males having five or more drinks or females having four or more drinks on one occasion in the past 30 days.

Percentage of Adults Ages 18 Years and Older Who Were Binge Drinkers, by Co-Morbid Conditions, KS BRFSS 2018‡



‡ Binge drinkers are defined as males having five or more drinks or females having four or more drinks on one occasion in the past 30 days.

The percentage of Kansas adults ages 18 years and older who were binge drinkers was significantly **higher** among:

- Adults without arthritis compared with those with arthritis
- Adults without diabetes compared with those with diabetes

The percentage of Kansas adults ages 18 years and older who were binge drinkers did not differ significantly by current asthma status or weight category.

SUMMARY

Approximately 15.8 percent of Kansas adults ages 18 years and older were binge drinkers. In addition, higher prevalence of binge drinking was seen among: males, younger adults, non-Hispanic whites, adults with annual household income of $50,000 or more, adults without arthritis, adults without diabetes and adults living without a disability.

The Healthy People 2020 goal is to reduce the proportion of adults ages 18 years and older engaging in binge drinking to 24.2 percent. Kansas is meeting the Healthy People 2020 goal. However, overall prevalence is still high and there are disparities in population subgroups that have not met the HP 2020 target. Therefore, further public health efforts are needed to address overall prevalence and disparities in population subgroups in Kansas.

Due to changes in BRFSS survey methodology 2011- 2018 BRFSS estimates cannot be compared with estimates from previous years. Please refer to Technical Notes for more information about BRFSS survey methodology.

Substance Abuse: Drinking and Driving

Drinking and driving resulted in approximately 11,000 preventable deaths nationwide in 2009.[22] The Healthy People 2020 goal is to decrease the rate of alcohol-impaired driving fatalities. The best way to prevent alcohol-impaired driving fatalities is to prevent alcohol-impaired driving.

In 2018, approximately 3 in 100 Kansas adults ages 18 years and older were drinking and driving in the past 30 days. The percentage of Kansas adults ages 18 years and older who were drinking and driving in the past 30 days was significantly **higher** among:

- Males compared with females

The percentage of Kansas adults who were drinking and driving in the past 30 days did not differ significantly by age groups, race/ethnicity groups (age-adjusted prevalence), education groups, income groups, disability status or insurance status.

Percentage of Adults Ages 18 Years and Older Who Were Drinking and Driving in the Past 30 Days, KS BRFSS 2018

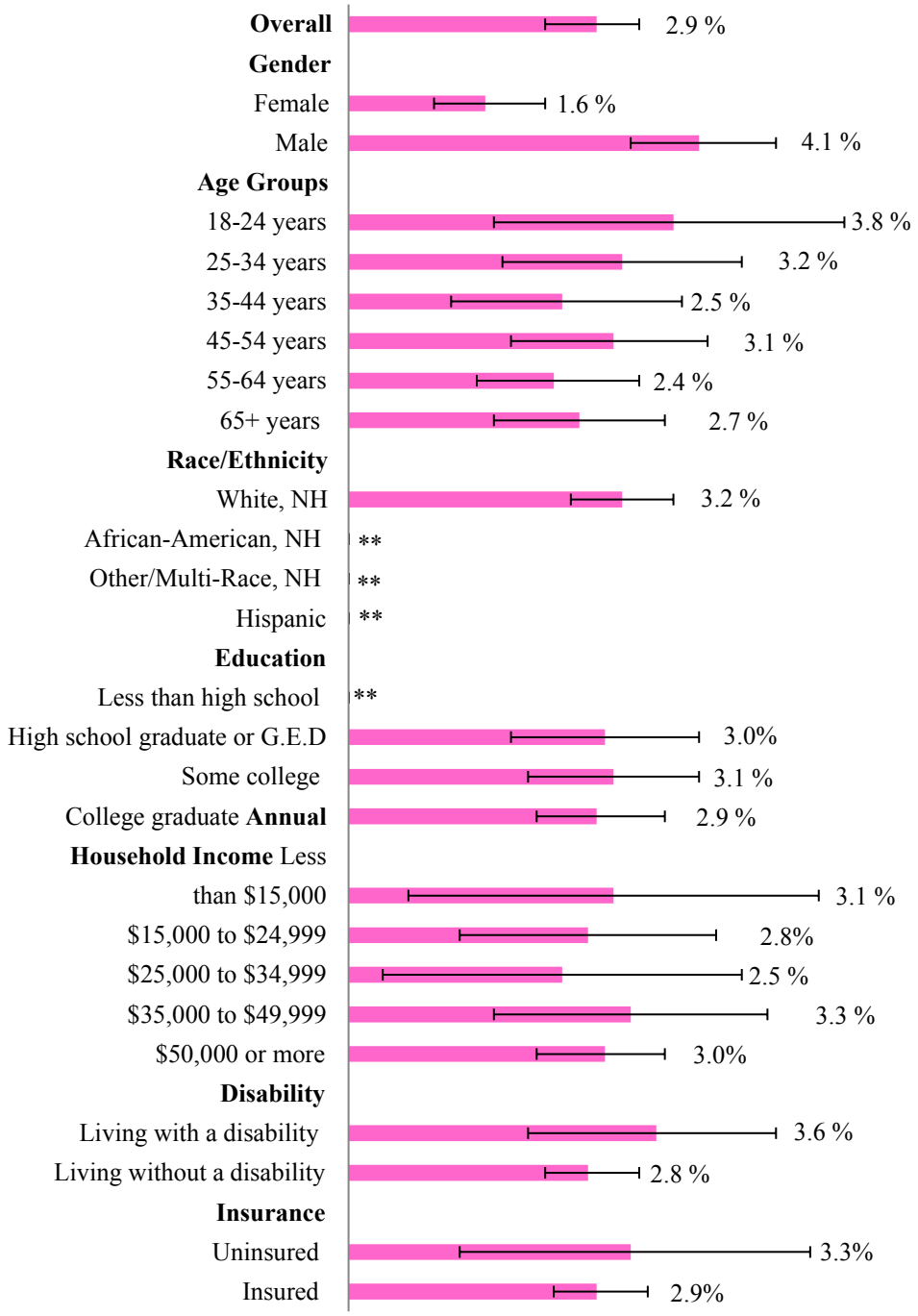
Demographic Characteristics	Weighted Percentage	95% CI
Overall	2.9	2.4-3.5
Gender		
Female	1.6	0.9-2.2
Male	4.1	3.2-4.9
Age Groups		
18-24 years	3.8	1.8-5.9
25-34 years	3.2	1.8-4.6
35-44 years	2.5	1.1-3.8
45-54 years	3.1	2.0-4.3
55-64 years	2.4	1.4-3.3
65+ years	2.7	1.7-3.7
Race/Ethnicity		
White, NH	3.2	2.6-3.8
African-American, NH	**	**
Other/Multi-Race, NH	**	**
Hispanic	**	**
Education		
Less than high school	**	**
High school graduate or G.E.D	3.0	1.9-4.1
Some college	3.1	2.1-4.1
College graduate	2.9	2.1-3.6
Annual Household Income		
Less than $15,000	3.1	0.7-5.5
$15,000 to $24,999	2.8	1.3-4.3
$25,000 to $34,999	2.5	0.4-4.6
$35,000 to $49,999	3.3	1.7-4.9
$50,000 or more	3.0	2.3-3.8
Disability		
Living with a disability	3.6	2.2-5.1
Living without a disability	2.8	2.2-3.3
Insurance		
Uninsured	3.3	1.2-5.3
Insured	2.9	2.3-3.4

** Insufficient sample and/or statistically unreliable estimate.

†Living with a disability: Respondents who have at least one of the six disability types (hearing, vision, cognition, mobility,self-care, and/or independent living).

Due to changes in BRFSS survey methodology 2011- 2018 BRFSS estimates cannot be compared with estimates from previous years. Please refer to Technical Notes for more information about BRFSS survey methodology.

Percentage of Adults Aged 18 Years and Older Who Were Drinking and Driving in the Past 30 Days, KS BRFSS 2018



** Insufficient sample and/or statistically unreliable estimate.
†Living with a disability: Respondents who have at least one of the six disability types (hearing, vision, cognition, mobility, self-care, and/or independent living).

Due to changes in BRFSS survey methodology 2011- 2018 BRFSS estimates cannot be compared with estimates from previous years. Please refer to Technical Notes for more information about BRFSS survey methodology.

Percentage of Adults Ages 18 Years and Older Who Were Drinking and Driving in the Past 30 Days by Co-Morbid Conditions, KS BRFSS 2018

Co-Morbid Conditions		Weighted Percentage	95% CI
Current Asthma			
	Yes	2.1	0.7-3.4
	No	3.0	2.5-3.6
Arthritis			
	Yes	2.8	1.9-3.7
	No	3.0	2.3-3.6
Weight			
	Normal or Underweight, BMI<25	3.3	2.2-4.4
	Overweight, 25<= BMI<30	3.3	2.4-4.2
	Obese, BMI>=30	2.4	1.6-3.3
Diabetes			
	Yes	1.5	0.4-2.7
	No	3.1	2.5-3.6

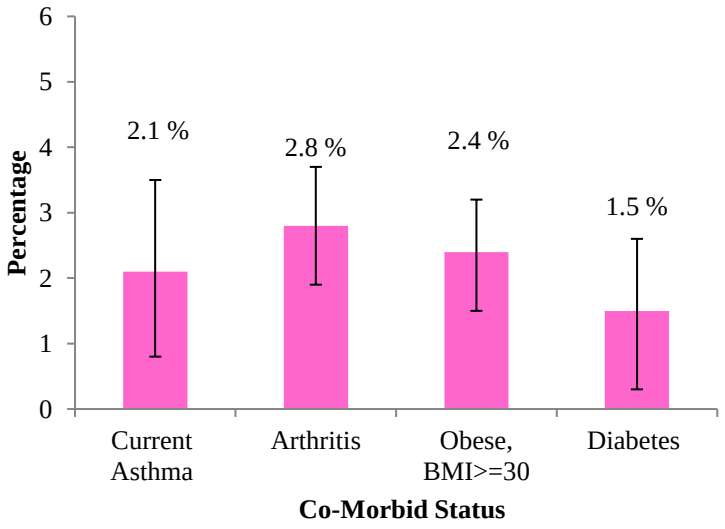
The percentage of Kansas adults who were drinking and driving in the past 30 days did not differ significantly by current asthma status, arthritis status, diabetes status or weight status.

SUMMARY

Approximately 3 percent of Kansas adults were drinking and driving in the past 30 days. In addition, higher percentages of males were drinking and driving in the past 30 days.

The Healthy People 2020 goal is to decrease the rate of alcohol-impaired driving fatalities. Further public health efforts are needed to reduce drinking and driving in the overall population and its subgroups in Kansas.

Percentage of Adults Aged 18 Years and Older Who Were Drinking and Driving in the Past 30 Days by Co-Morbid Conditions, KS BRFSS 2018



Due to changes in BRFSS survey methodology 2011- 2018 BRFSS estimates cannot be compared with estimates from previous years. Please refer to Technical Notes for more information about BRFSS survey methodology.

Mental Health: Depression

Depression and anxiety are considered to be the leading causes of mental health disorders. Mental health is essential to a person's well-being, healthy relationships, healthy behaviors and physical health.[24] Healthy People 2020 included mental health as a leading health indicator and included an objective to reduce the proportion of adults ages 18 years and older who experience major depressive episodes.

In 2018, approximately 1 in 5 Kansas adults ages 18 years and older had ever been diagnosed with depression. The percentage of Kansas adults ages 18 years and older who were ever diagnosed with depression was significantly **higher** among:

- Females compared with males
- Adults ages younger than 65 years compared with adults ages 65 years and older
- Adults who had less than high school education compared with adults who had more than a high school education; and adults who were not college graduates compared with college graduates
- Adults with lower annual household income compared with adults with higher annual household income
- Adults living with a disability compared with adults living without a disability
- Adults with no insurance compared with adults with insurance

The percentage of Kansas adults ages 18 years and older who were ever diagnosed with depression did not differ significantly by race/ethnicity groups.

Percentage of Adults Ages 18 Years and Older Who Were Ever Diagnosed With Depression, KS BRFSS 2018

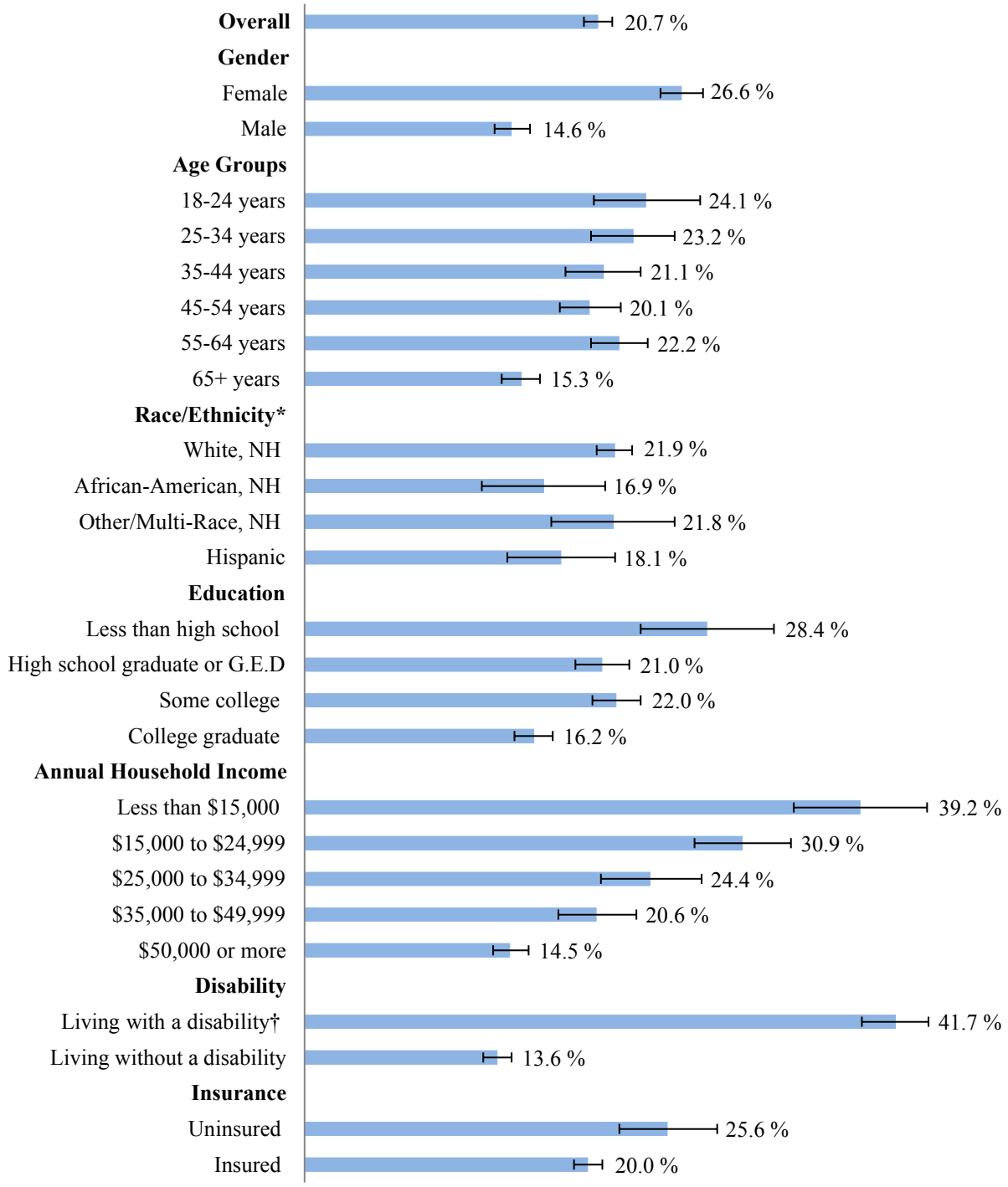
Demographic Characteristics	Weighted Percentage	95% CI
Overall	20.7	19.7-21.7
Gender		
Female	26.6	25.1-28.1
Male	14.6	13.3-15.8
Age Groups		
18-24 years	24.1	20.3-27.8
25-34 years	23.2	20.3-26.2
35-44 years	21.1	18.5-23.8
45-54 years	20.1	17.9-22.2
55-64 years	22.2	20.2-24.2
65+ years	15.3	14.0-16.7
Race/Ethnicity*		
White, NH	21.9	20.7-23.2
African-American, NH	16.9	12.6-21.3
Other/Multi-Race, NH	21.8	17.5-26.2
Hispanic	18.1	14.3-21.9
Education		
Less than high school	28.4	23.7-33.1
High school graduate or G.E.D	21.0	19.1-22.9
Some college	22.0	20.3-23.7
College graduate	16.2	14.9-17.6
Annual Household Income		
Less than $15,000	39.2	34.5-43.9
$15,000 to $24,999	30.9	27.5-34.3
$25,000 to $34,999	24.4	20.8-27.9
$35,000 to $49,999	20.6	17.8-23.3
$50,000 or more	14.5	13.2-15.7
Disability		
Living with a disability†	41.7	39.4-44.1
Living without a disability	13.6	12.6-14.6
Insurance		
Uninsured	25.6	22.1-29.0
Insured	20.0	19.0-21.0

*Prevalence estimates for race and ethnicity were age-adjusted to the U.S. 2000 standard population.

†Living with a disability: Respondents who have at least one of the six disability types (hearing, vision, cognition, mobility,self-care, and/or independent living).

Due to changes in BRFSS survey methodology 2011- 2018 BRFSS estimates cannot be compared with estimates from previous years. Please refer to Technical Notes for more information about BRFSS survey methodology.

Percentage of Adults Ages 18 Years and Older Who Were Ever Diagnosed With Depression, KS BRFSS 2018



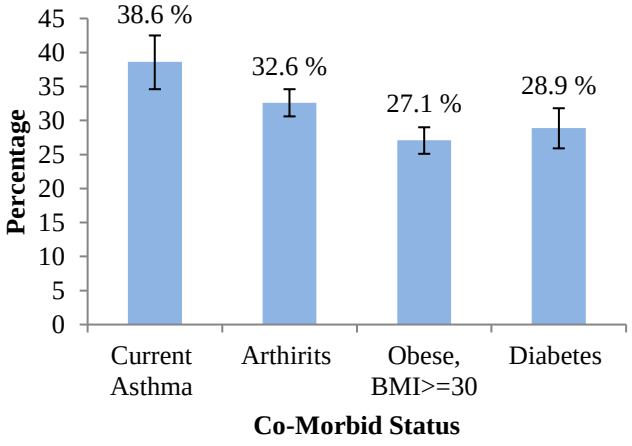
*Prevalence estimates for race and ethnicity were age-adjusted to the U.S. 2000 standard population.
†Living with a disability: Respondents who have at least one of the six disability types (hearing, vision, cognition, mobility, self-care, and/or independent living).

Due to changes in BRFSS survey methodology 2011- 2018 BRFSS estimates cannot be compared with estimates from previous years. Please refer to Technical Notes for more information about BRFSS survey methodology.

Percentage of Adults Ages 18 Years and Older Who Were Ever Diagnosed With Depression by Co-Morbid Conditions, KS BRFSS 2018

Co-Morbid Conditions		Weighted Percentage	95% CI
Current Asthma			
	Yes	38.6	34.7-42.6
	No	18.7	17.6-19.7
Arthritis			
	Yes	32.6	30.6-34.6
	No	16.5	15.4-17.6
Weight			
	Normal or Underweight, BMI<25	18.1	16.3-20.0
	Overweight, 25<= BMI<30	17.7	16.1-19.4
	Obese, BMI>=30	27.1	25.2-29.1
Diabetes			
	Yes	28.9	26.0-31.9
	No	19.6	18.5-20.7

Percentage of Adults Ages 18 Years and Older Who Were Ever Diagnosed With Depression, by Co-Morbid Conditions, KS BRFSS 2018



The percentage of Kansas adults ages 18 years and older who were ever diagnosed with depression was significantly **higher** among:

- Adults with current asthma compared with those without current asthma
- Adults with arthritis compared with those without arthritis
- Adults who were obese compared with those who were normal weight, underweight or overweight
- Adults with diabetes compared with those without diabetes

SUMMARY

Approximately 20.7 percent of Kansas adults ages 18 years and older have ever been diagnosed with depression. In addition, higher percentages of adults who have ever been diagnosed with depression were seen among: females, adults younger than 65 years of age, adults who have less than high school education, adults with lower annual household income, adults with no insurance, adults with co-morbid conditions (current asthma, arthritis, diabetes or obesity), and those living with a disability.

To address high prevalence of depression and associated disparities among adults ages 18 years and older, further public health efforts are needed in Kansas.

Due to changes in BRFSS survey methodology 2011- 2018 BRFSS estimates cannot be compared with estimates from previous years. Please refer to Technical Notes for more information about BRFSS survey methodology.

Chronic Health Conditions: Diabetes

Diabetes is the seventh leading cause of death in the U.S.[25] Diabetes is a major cause of heart disease and stroke, and the leading cause of kidney failure, non-traumatic lower limb amputations, and new cases of blindness among adults in the U.S.[25] The Healthy People 2020 goal for diabetes is to reduce the disease burden of diabetes mellitus and improve the quality of life for all persons who have, or are at risk for, diabetes mellitus.

In 2018, approximately 1 in 10 Kansas adults ages 18 years and older had ever been diagnosed with diabetes. The percentage of Kansas adults ages 18 years and older who were ever diagnosed with diabetes was significantly **higher** among:

- Older adults compared with younger adults
- Non-Hispanic African-Americans, Hispanics and non-Hispanic other/multi-race compared with non-Hispanic whites (age-adjusted prevalence)
- Adults with less education compared with adults in higher education groups
- dults with annual household income of less than $50,000 compared with adults with annual household income of $50,000 or more
- Adults living with a disability compared with adults living without a disability
- Adults with insurance compared with adults with no insurance

The percentage of Kansas adults ages 18 years and older who were ever diagnosed with diabetes did not differ significantly by gender groups.

Percentage of Adults Ages 18 Years and Older With Diagnosed Diabetes, KS BRFSS 2018

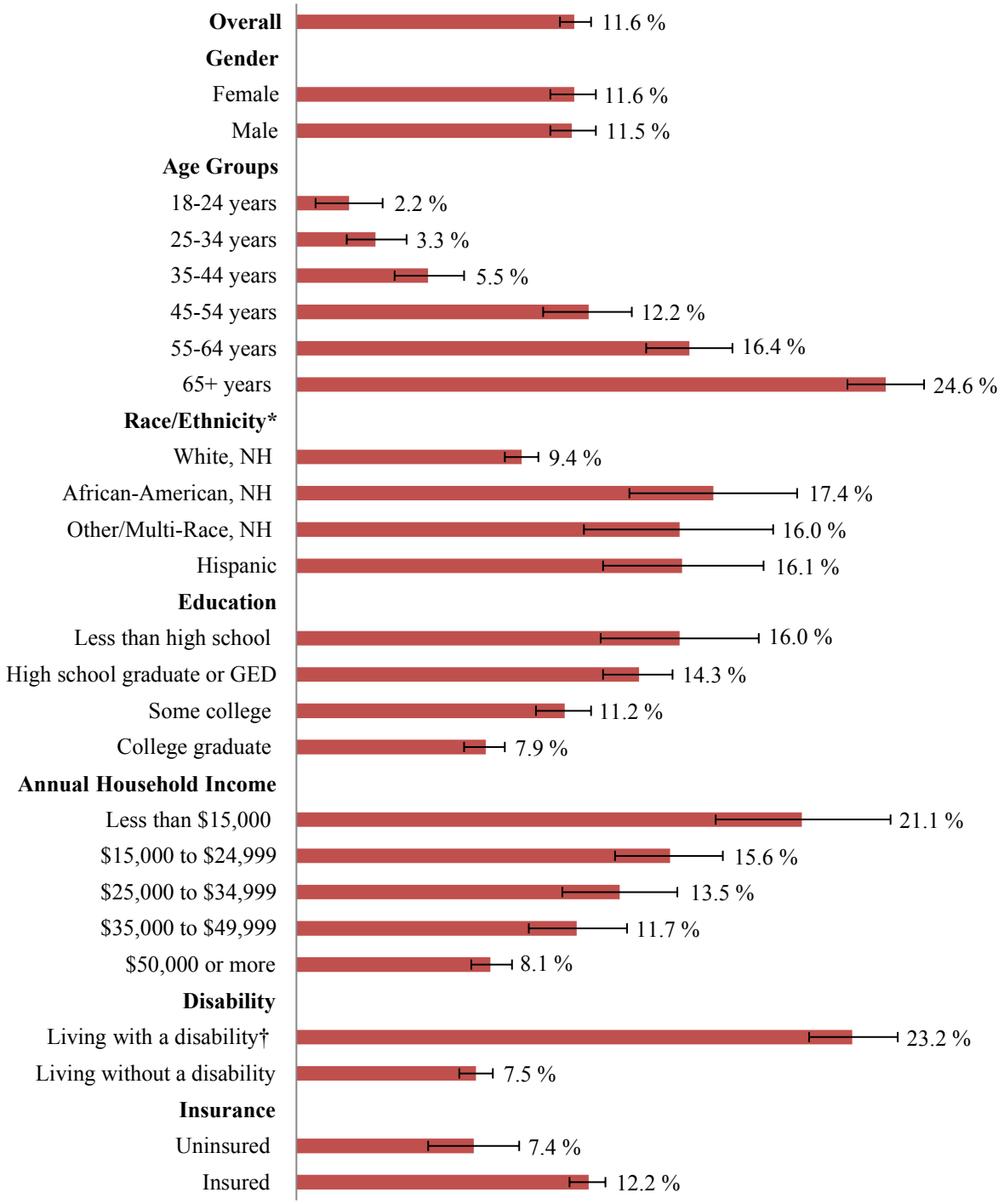
Demographic Characteristics	Weighted Percentage	95% CI
Overall	11.6	10.9-12.2
Gender		
Female	11.6	10.7-12.6
Male	11.5	10.5-12.4
Age Groups		
18-24 years	2.2	0.8-3.6
25-34 years	3.3	2.0-4.5
35-44 years	5.5	4.0-6.9
45-54 years	12.2	10.4-14.1
55-64 years	16.4	14.6-18.2
65+ years	24.6	23.0-26.2
Race/Ethnicity*		
White, NH	9.4	8.7-10.1
African-American, NH	17.4	13.9-20.9
Other/Multi-Race, NH	16.0	12.1-20.0
Hispanic	16.1	12.7-19.4
Education		
Less than high school	16.0	12.7-19.3
High school graduate or GED	14.3	12.9-15.8
Some college	11.2	10.1-12.4
College graduate	7.9	7.1-8.8
Annual Household Income		
Less than $15,000	21.1	17.4-24.7
$15,000 to $24,999	15.6	13.4-17.9
$25,000 to $34,999	13.5	11.1-15.9
$35,000 to $49,999	11.7	9.6-13.7
$50,000 or more	8.1	7.2-8.9
Disability		
Living with a disability†	23.2	21.3-25.0
Living without a disability	7.5	6.8-8.2
Insurance		
Uninsured	7.4	5.5-9.3
Insured	12.2	11.5-13.0

*Prevalence estimates for race and ethnicity were age-adjusted to the U.S. 2000 standard population.

†Living with a disability: Respondents who have at least one of the six disability types (hearing, vision, cognition, mobility,self-care, and/or independent living).

Due to changes in BRFSS survey methodology 2011- 2018 BRFSS estimates cannot be compared with estimates from previous years. Please refer to Technical Notes for more information about BRFSS survey methodology.

Percentage of Adults Ages 18 Years and Older With Diagnosed Diabetes, KS BRFSS 2018



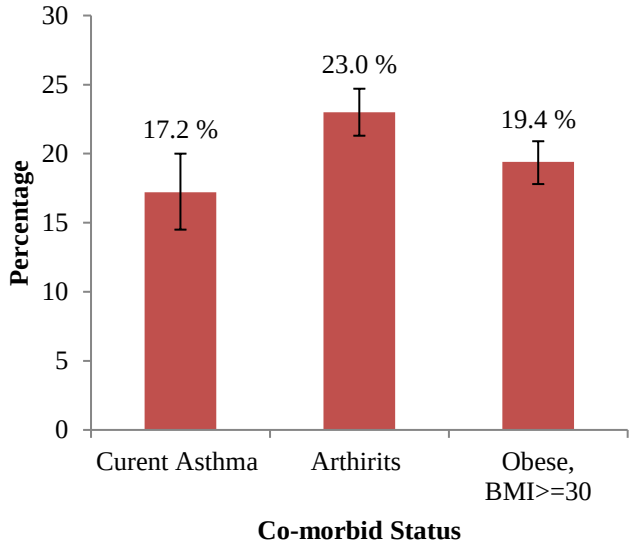
*Prevalence estimates for race and ethnicity were age-adjusted to the U.S. 2000 standard population.
†Living with a disability: Respondents who have at least one of the six disability types (hearing, vision, cognition, mobility, self-care, and/or independent living).

Due to changes in BRFSS survey methodology 2011- 2018 BRFSS estimates cannot be compared with estimates from previous years. Please refer to Technical Notes for more information about BRFSS survey methodology.

Percentage of Adults Ages 18 Years and Older With Diagnosed Diabetes by Co-Morbid Conditions, KS BRFSS 2018

Co-Morbid Conditions		Weighted Percentage	95% CI
Current Asthma			
	Yes	17.2	14.4-19.9
	No	11.0	10.3-11.7
Arthritis			
	Yes	23.0	21.3-24.7
	No	7.5	6.8-8.2
Weight			
	Normal or Underweight, BMI<25	5.2	4.2-6.1
	Overweight, 25<= BMI<30	9.7	8.6-10.8
	Obese, BMI>=30	19.4	17.9-21.0

Percentage of Adults Ages 18 Years and Older With Diagnosed Diabetes, by Co-Morbid Conditions, KS BRFSS 2018



The percentage of Kansas adults ages 18 years and older who were ever diagnosed with diabetes was significantly **higher** among:

- Adults with current asthma compared with those without current asthma
- Adults with arthritis compared with those without arthritis
- Adults who were obese compared with those who were overweight, normal weight or underweight; and adults who were overweight compared with those who were, normal weight or underweight

SUMMARY

Approximately 11.6 percent of Kansas adults ages 18 years and older have ever been diagnosed with diabetes. In addition, higher percentages of adults who have ever been diagnosed with diabetes were seen among: older adults, non-Hispanic African-Americans, Hispanics, non-Hispanic other/multi-race, those with less education, those with annual household income of less than $50,000, those with insurance, those with chronic health conditions (current asthma, arthritis overweight or obesity) and those living with a disability.

To reduce prevalence of diabetes among adults ages 18 years and older and to address associated disparities, further public health efforts are needed in Kansas.

Due to changes in BRFSS survey methodology 2011- 2018 BRFSS estimates cannot be compared with estimates from previous years. Please refer to Technical Notes for more information about BRFSS survey methodology.

Chronic Health Conditions: Prediabetes

A person with prediabetes is at a higher risk for developing type 2 diabetes or other serious health problems.[25] It is estimated that 15 to 30 percent of people with prediabetes without any lifestyle changes within five years will develop type 2 diabetes.[25] Prediabetes is defined as those who answered "prediabetes or borderline diabetes" to the question "have you ever been told that you have diabetes?" and "yes" to the question "have you ever been told that you have prediabetes or borderline diabetes?" The Healthy People 2020 goal is to reduce prediabetes and the economic burden of diabetes mellitus and improve the quality of life for all persons who have or at risk for diabetes mellitus. [26]

In 2018, approximately 1 in 10 Kansas adults ages 18 years and older had ever been diagnosed with prediabetes. The percentage of Kansas adults who were ever diagnosed with prediabetes was significantly **higher** among:

- Adults ages 55 years and older compared with adults to ages 35 years old and younger
- Adults living with a disability compared with adults living without a disability

The percentage of Kansas adults ages 18 years and older who were ever diagnosed with prediabetes did not differ significantly by gender, race/ethnicity (age-adjusted prevalence), education, income or insurance status.

Percentage of Adults Ages 18 Years and Older with Diagnosed Prediabetes or Borderline Diabetes, KS BRFSS 2018

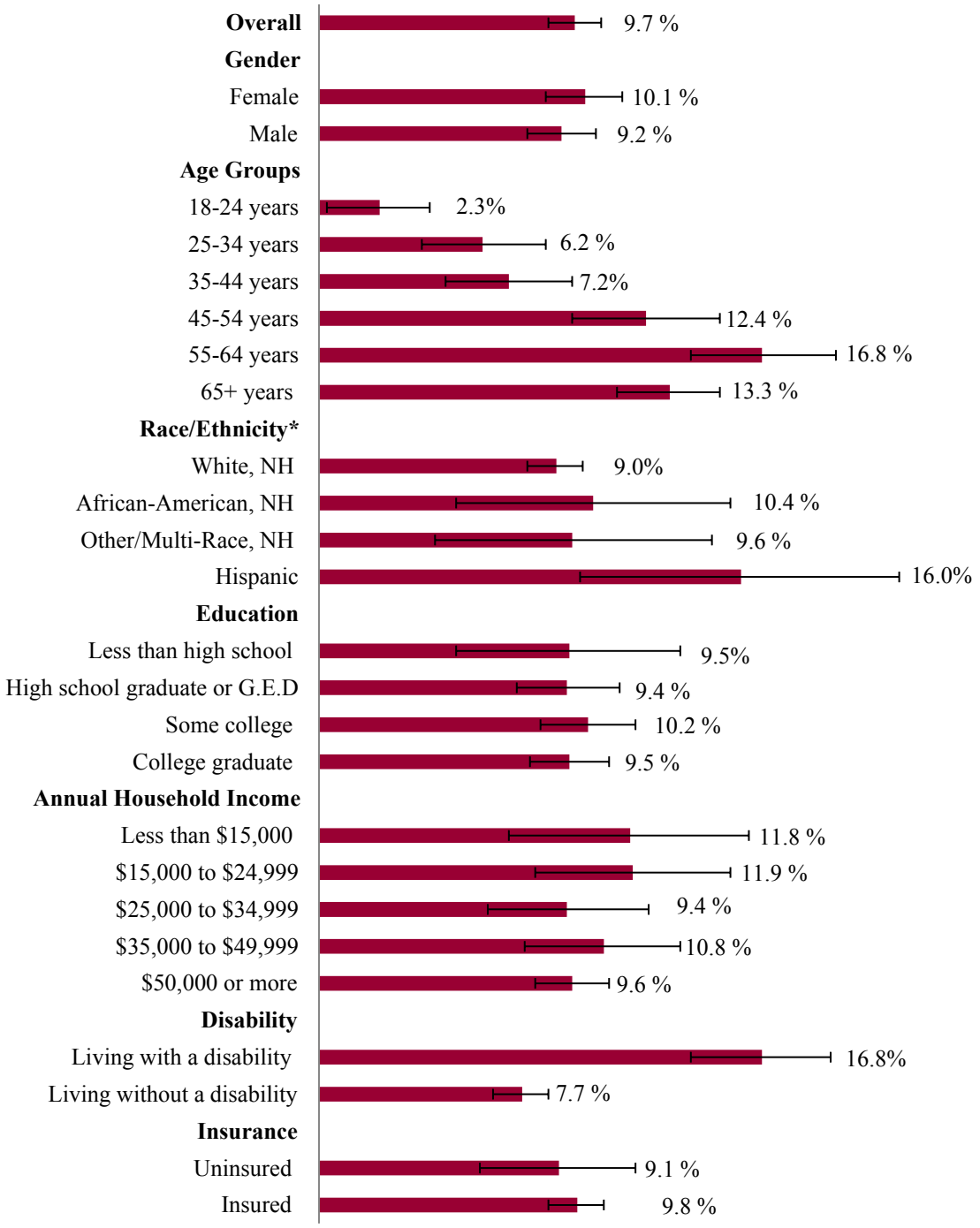
Demographic Characteristics	Weighted Percentage	95% CI
Overall	9.7	8.7-10.7
Gender		
Female	10.1	8.7-11.6
Male	9.2	7.9-10.5
Age Groups		
18-24 years	2.3	0.4-4.3
25-34 years	6.2	3.8-8.5
35-44 years	7.2	4.8-9.6
45-54 years	12.4	9.6-15.2
55-64 years	16.8	14.0-19.5
65+ years	13.3	11.4-15.3
Race/Ethnicity*		
White, NH	9.0	8.0-10.1
African-American, NH	10.4	5.2-15.6
Other/Multi-Race, NH	9.6	4.3-14.8
Hispanic	16.0	10.0-22.1
Education		
Less than high school	9.5	5.3-13.8
High school graduate or G.E.D	9.4	7.4-11.3
Some college	10.2	8.4-12.0
College graduate	9.5	8.0-11.0
Annual Household Income		
Less than $15,000	11.8	7.3-16.4
$15,000 to $24,999	11.9	8.2-15.6
$25,000 to $34,999	9.4	6.3-12.4
$35,000 to $49,999	10.8	7.9-13.8
$50,000 or more	9.6	8.2-11.0
Disability		
Living with a disability	16.8	14.2-19.5
Living without a disability	7.7	6.7-8.8
Insurance		
Uninsured	9.1	6.2-12.1
Insured	9.8	8.8-10.9

*Prevalence estimates for race and ethnicity were age-adjusted to the U.S. 2000 standard population.

†Living with a disability: Respondents who have at least one of the six disability types (hearing, vision, cognition, mobility,self-care, and/or independent living).

Due to changes in BRFSS survey methodology 2011- 2018 BRFSS estimates cannot be compared with estimates from previous years. Please refer to Technical Notes for more information about BRFSS survey methodology.

Percentage of Adults Aged 18 Years and Older with Diagnosed Prediabetes or Borderline Diabetes, KS BRFSS 2018



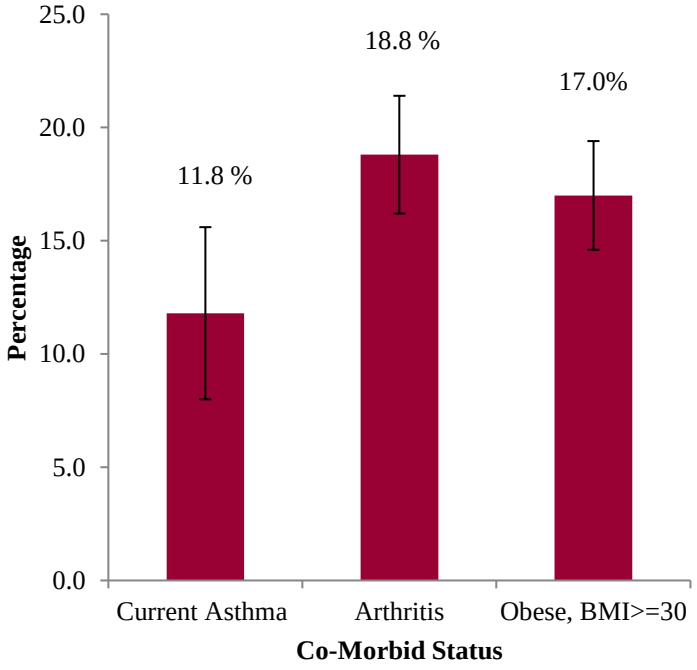
*Prevalence estimates for race and ethnicity were age-adjusted to the U.S. 2000 standard population.
†Living with a disability: Respondents who have at least one of the six disability types (hearing, vision, cognition, mobility, self-care, and/or independent living).

Due to changes in BRFSS survey methodology 2011- 2018 BRFSS estimates cannot be compared with estimates from previous years. Please refer to Technical Notes for more information about BRFSS survey methodology.

Percentage of Adults Ages 18 Years and Older with Diagnosed Prediabetes or Borderline Diabetes by Co-Morbid Conditions, KS BRFSS 2018

Co-Morbid Conditions		Weighted Percentage	95% CI
Current Asthma			
	Yes	11.8	8.0-15.6
	No	9.5	8.4-10.5
Arthritis			
	Yes	18.8	16.2-21.4
	No	7.0	6.0-8.0
Weight			
	Normal or Underweight, BMI<25	3.9	2.7-5.1
	Overweight, 25<= BMI<30	9.4	7.8-11.0
	Obese, BMI>=30	17.0	14.6-19.4

Percentage of Adults Aged 18 Years and Older with Diagnosed Prediabetes or Borderline Diabetes by Co-Morbid Conditions, KS BRFSS 2018



The percentage of Kansas adults ages 18 years and older who were ever diagnosed with prediabetes was significantly **higher** among:

- Adults with arthritis compared with those without arthritis
- Adults who were obese compared with those who were normal weight, underweight or overweight
- Adults who were overweight compared with those who were normal weight or underweight

The percentage of Kansas adults ages 18 years and older who were ever diagnosed with prediabetes did not differ significantly by current asthma status.

SUMMARY

Approximately 10 percent of Kansas adults have ever been diagnosed with prediabetes. In addition, higher percentages of adults who have ever been diagnosed with prediabetes were seen among: adults ages 55 years and older, those with arthritis, overweight or obesity and those living with a disability.

To address associated disparities with prediabetes, further public health efforts are needed in Kansas.

Due to changes in BRFSS survey methodology 2011- 2018 BRFSS estimates cannot be compared with estimates from previous years. Please refer to Technical Notes for more information about BRFSS survey methodology.

Chronic Health Conditions: Asthma

Asthma affects not only the individual but also their families, schools, neighborhoods, cities and states. The cost of asthma also affects the health care system since the annual health care expenditures for asthma are estimated at $20.7 billion.[26] The Healthy People 2020 goal for asthma is to reduce the disease, death and economic burden, and improve the quality of life for all persons with asthma.

In 2018, approximately 1 in 10 Kansas adults ages 18 years and older had been diagnosed with current asthma. The percentage of Kansas adults ages 18 years and older who were diagnosed with current asthma was significantly **higher** among:

- Females compared with males
- Adults ages 18 to 24 years compared to adults ages 45 to 54 years or 65 years and older
- Non-Hispanic African-Americans, non-Hispanic other/multi-race and non-Hispanic whites compared with Hispanics (age-adjusted prevalence)
- Adults who had less than high school education compared with college graduates; and adults who had some college education compared with college graduates
- Adults with lower annual household income compared with adults with higher annual household income
- Adults living with a disability compared with adults living without a disability

The percentage of Kansas adults ages 18 years and older who were diagnosed with current asthma did not differ significantly by race/ethnicity groups or insurance status.

Percentage of Adults Ages 18 Years and Older With Current Asthma, KS BRFSS 2018

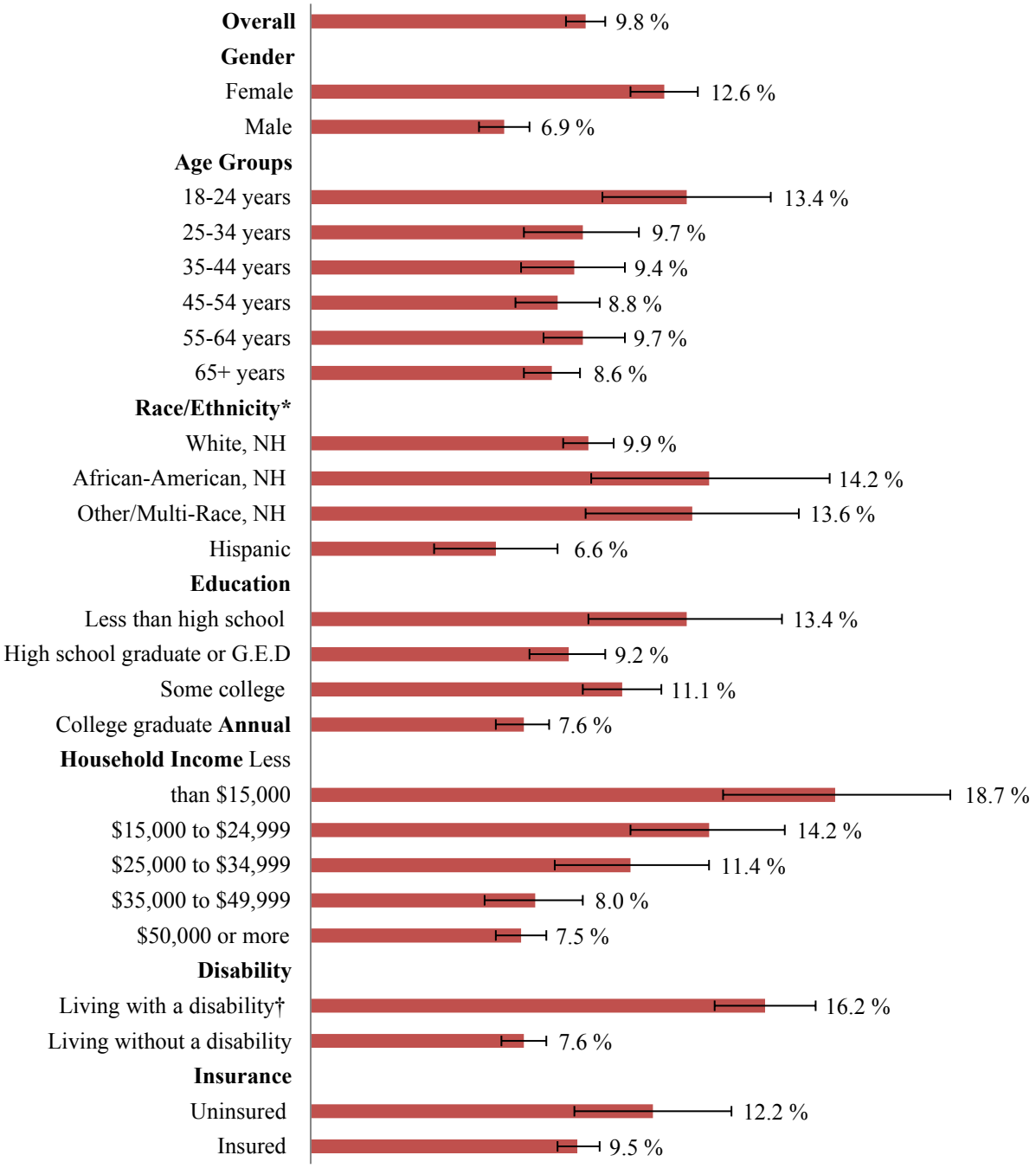
Demographic Characteristics	Weighted Percentage	95% CI
Overall	9.8	9.1-10.5
Gender		
Female	12.6	11.4-13.8
Male	6.9	6.0-7.8
Age Groups		
18-24 years	13.4	10.4-16.4
25-34 years	9.7	7.7-11.8
35-44 years	9.4	7.6-11.3
45-54 years	8.8	7.3-10.3
55-64 years	9.7	8.2-11.1
65+ years	8.6	7.6-9.6
Race/Ethnicity*		
White, NH	9.9	9.0-10.8
African-American, NH	14.2	9.9-18.4
Other/Multi-Race, NH	13.6	9.8-17.4
Hispanic	6.6	4.4-8.8
Education		
Less than high school	13.4	10.0-16.9
High school graduate or G.E.D	9.2	7.9-10.6
Some college	11.1	9.7-12.5
College graduate	7.6	6.7-8.6
Annual Household Income		
Less than $15,000	18.7	14.6-22.7
$15,000 to $24,999	14.2	11.5-17.0
$25,000 to $34,999	11.4	8.6-14.1
$35,000 to $49,999	8.0	6.3-9.8
$50,000 or more	7.5	6.6-8.4
Disability		
Living with a disability†	16.2	14.4-18.0
Living without a disability	7.6	6.8-8.4
Insurance		
Uninsured	12.2	9.4-15.0
Insured	9.5	8.7-10.2

*Prevalence estimates for race and ethnicity were age-adjusted to the U.S. 2000 standard population.

†Living with a disability: Respondents who have at least one of the six disability types (hearing, vision, cognition, mobility,self-care, and/or independent living).

Due to changes in BRFSS survey methodology 2011- 2018 BRFSS estimates cannot be compared with estimates from previous years. Please refer to Technical Notes for more information about BRFSS survey methodology.

Percentage of Adults Ages 18 Years and Older with Current Asthma, KS BRFSS 2018



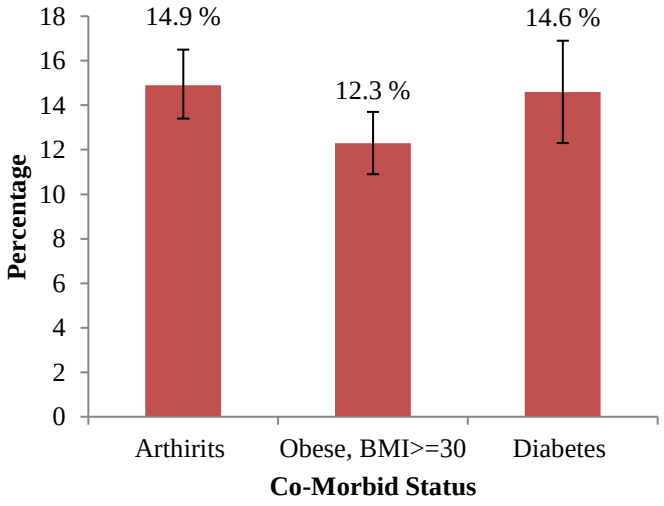
*Prevalence estimates for race and ethnicity were age-adjusted to the U.S. 2000 standard population.
†Living with a disability: Respondents who have at least one of the six disability types (hearing, vision, cognition, mobility, self-care, and/or independent living).

Due to changes in BRFSS survey methodology 2011- 2018 BRFSS estimates cannot be compared with estimates from previous years. Please refer to Technical Notes for more information about BRFSS survey methodology.

Percentage of Adults Ages 18 Years and Older with Current Asthma by Co-Morbid Conditions, KS BRFSS 2018

Co-Morbid Conditions	Weighted Percentage	95% CI
Arthritis		
Yes	14.9	13.3-16.4
No	8.0	7.1-8.8
Weight		
Normal or Underweight, BMI<25	9.5	8.0-11.0
Overweight, 25<= BMI<30	7.3	6.2-8.4
Obese, BMI>=30	12.3	10.9-13.7
Diabetes		
Yes	14.6	12.3-16.9
No	9.2	8.4-10.0

Percentage of Adults Ages 18 Years and Older with Current Asthma, by Co-Morbid Conditions, KS BRFSS 2018



The percentage of Kansas adults ages 18 years and older who were diagnosed with current asthma was significantly **higher** among:

- Adults with arthritis compared with those without arthritis
- Adults who were obese compared with those who were overweight
- Adults with diabetes compared with those without diabetes

SUMMARY

About 9.8 percent of Kansas adults ages 18 years and older have been diagnosed with current asthma. In addition, higher percentages of adults who have been diagnosed with current asthma were seen among: females, adults ages 18 to 24 years, non-Hispanic African-Americans, non-Hispanic other/multi-race and non-Hispanic whites, adults who had less than high school education, adults with lower annual household incomes, those with chronic health conditions (arthritis, diabetes or obesity) and those living with a disability.

To address overall burden of current asthma and associated disparities, further public health efforts are needed in Kansas.

Due to changes in BRFSS survey methodology 2011- 2018 BRFSS estimates cannot be compared with estimates from previous years. Please refer to Technical Notes for more information about BRFSS survey methodology.

Chronic Health Conditions: Arthritis

Arthritis is the most common cause of disability.[27] In 2013 the U.S. total attributable cost for Arthritis and other rheumatoid conditions was about $304 billion ($140 billion medical expenditures and $164 billion as loss of earnings).[28] Arthritis includes people who have ever been told they have some form of arthritis, rheumatoid arthritis, gout, lupus or fibromyalgia. The Healthy People 2020 goal for arthritis is to reduce the disease and economic burden, and improve the quality of life for all persons with arthritis.

In 2018, approximately 1 in 4 Kansas adults ages 18 years and older had diagnosed arthritis. The percentage of Kansas adults ages 18 years and older who were diagnosed with arthritis was significantly **higher** among:

- Females compared with males
- Older adults compared with younger adults
- Adults who were not college graduates compared with those who were college graduates
- Adults with lower annual household incomes compared with adults in higher annual household income groups
- Adults living with a disability compared with adults living without a disability
- Adults with insurance compared with adults with no insurance

The percentage of Kansas adults ages 18 years and older who were diagnosed with arthritis did not differ significantly by race/ethnicity groups.

Percentage of Adults Ages 18 Years and Older Diagnosed With Some Form of Arthritis, Rheumatoid Arthritis, Gout, Lupus or Fibromyalgia, KS BRFSS 2018

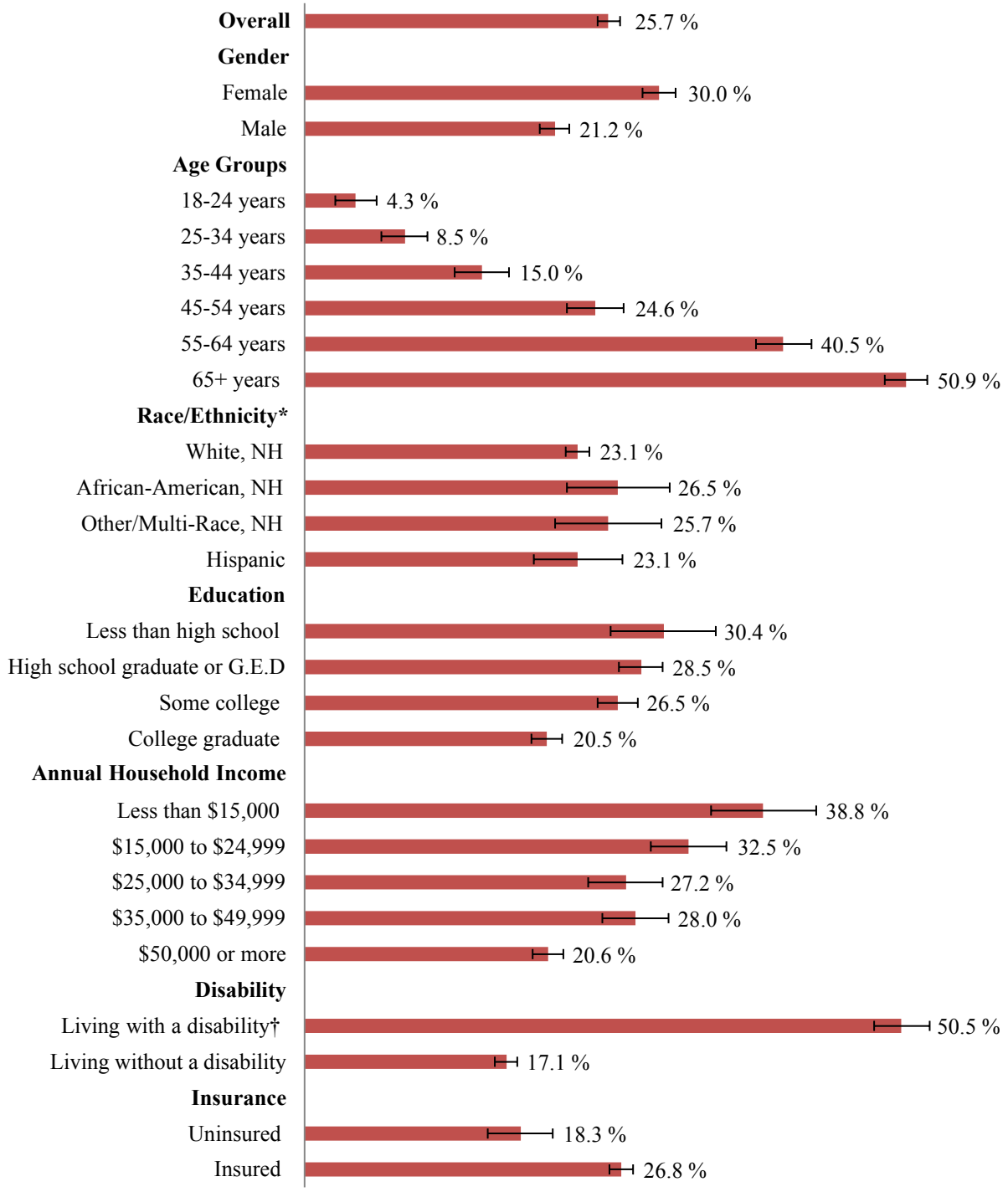
Demographic Characteristics	Weighted Percentage	95% CI
Overall	25.7	24.7-26.6
Gender		
Female	30.0	28.6-31.4
Male	21.2	20.0-22.5
Age Groups		
18-24 years	4.3	2.5-6.0
25-34 years	8.5	6.6-10.5
35-44 years	15.0	12.7-17.3
45-54 years	24.6	22.2-27.0
55-64 years	40.5	38.1-42.8
65+ years	50.9	49.1-52.7
Race/Ethnicity*		
White, NH	23.1	22.1-24.1
African-American, NH	26.5	22.1-30.8
Other/Multi-Race, NH	25.7	21.2-30.2
Hispanic	23.1	19.3-26.8
Education		
Less than high school	30.4	26.0-34.9
High school graduate or G.E.D	28.5	26.7-30.4
Some college	26.5	24.8-28.2
College graduate	20.5	19.2-21.8
Annual Household Income		
Less than $15,000	38.8	34.3-43.2
$15,000 to $24,999	32.5	29.3-35.7
$25,000 to $34,999	27.2	24.1-30.4
$35,000 to $49,999	28.0	25.2-30.8
$50,000 or more	20.6	19.3-21.9
Disability		
Living with a disability†	50.5	48.1-52.8
Living without a disability	17.1	16.2-18.1
Insurance		
Uninsured	18.3	15.6-21.1
Insured	26.8	25.8-27.8

*Prevalence estimates for race and ethnicity were age-adjusted to the U.S. 2000 standard population.

†Living with a disability: Respondents who have at least one of the six disability types (hearing, vision, cognition, mobility,self-care, and/or independent living).

Due to changes in BRFSS survey methodology 2011- 2018 BRFSS estimates cannot be compared with estimates from previous years. Please refer to Technical Notes for more information about BRFSS survey methodology.

Percentage of Adults Ages 18 Years and Older Diagnosed With Some Form of Arthritis, Rheumatoid Arthritis, Gout, Lupus, or Fibromyalgia, KS BRFSS 2018



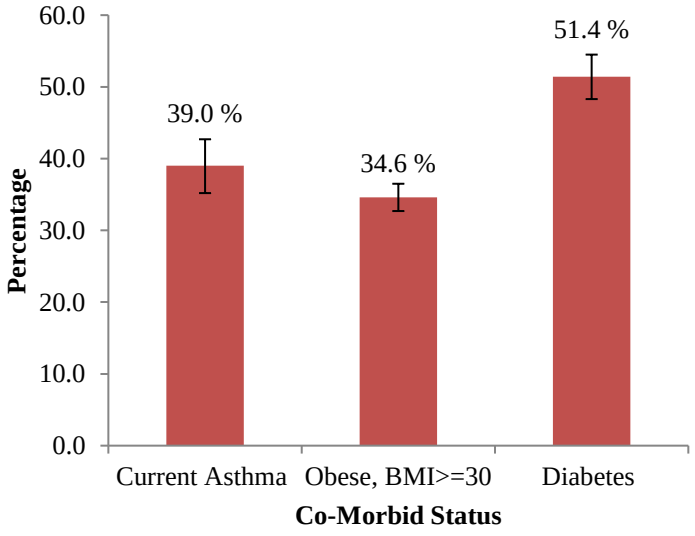
*Prevalence estimates for race and ethnicity were age-adjusted to the U.S. 2000 standard population.
†Living with a disability: Respondents who have at least one of the six disability types (hearing, vision, cognition, mobility, self-care, and/or independent living).

Due to changes in BRFSS survey methodology 2011- 2018 BRFSS estimates cannot be compared with estimates from previous years. Please refer to Technical Notes for more information about BRFSS survey methodology.

Percentage of Adults Ages 18 Years and Older Diagnosed With Some Form of Arthritis, Rheumatoid Arthritis, Gout, Lupus or Fibromyalgia by Co-Morbid Conditions, KS BRFSS 2018

Co-Morbid Conditions	Weighted Percentage	95% CI
Current Asthma		
Yes	39.0	35.2-42.7
No	24.1	23.1-25.1
Weight		
Normal or Underweight, BMI<25	17.9	16.3-19.4
Overweight, 25<= BMI<30	24.0	22.4-25.6
Obese, BMI>=30	34.6	32.7-36.5
Diabetes		
Yes	51.4	48.3-54.5
No	22.3	21.4-23.3

Percentage of Adults Ages 18 Years and Older Diagnosed With Some Form of Arthritis, Rheumatoid Arthritis, Gout, Lupus, or Fibromyalgia, by Co-Morbid Conditions, KS BRFSS 2018



The percentage of Kansas adults ages 18 years and older who were diagnosed with arthritis was significantly **higher** among:

- Adults with current asthma compared with those without current asthma
- Adults who were obese or overweight compared with those who were normal weight or underweight; and adults who were obese compared with overweight
- Adults with diabetes compared with those without diabetes

SUMMARY

Approximately 25.7 percent of Kansas adults ages 18 years and older have been diagnosed with arthritis. In addition, higher percentages of adults who have ever been diagnosed with arthritis were seen among: females, older adults, athose who were not college graduates, those with a lower annual household income, those with insurance, those with co-morbid conditions (current asthma, diabetes or obesity) and those living with a disability.

To address high prevalence of arthritis and associated disparities in population subgroups, further public health efforts are needed in Kansas.

Due to changes in BRFSS survey methodology 2011- 2018 BRFSS estimates cannot be compared with estimates from previous years. Please refer to Technical Notes for more information about BRFSS survey methodology.

Chronic Health Conditions: Hypertension

A major modifiable risk factor for heart disease and stroke is hypertension.[29] Adults with hypertension are at higher risk for first heart attack, first stroke, chronic (long lasting) heart failure and kidney disease.[30] The Healthy People 2020 goal is to reduce the proportion of adults with hypertension.

In 2018, about 1 in 3 Kansas adults ages 18 years and older had ever been diagnosed with hypertension. The percentage of Kansas adults ages 18 years and older who were ever diagnosed with hypertension was significantly **higher** among:

- Older adults compared with younger adults
- Adults with an annual household income less than $15,000 compared with adults with an annual household income of $50,000 or more
- Adults living with a disability compared with adults living without a disability
- Adults with insurance compared with adults with no insurance

The percentage of Kansas adults ages 18 years and older who were ever diagnosed with hypertension did not differ significantly by gender, race/ethnicity groups, and education groups.

Percentage of Adults Ages 18 Years and Older With Diagnosed Hypertension KS BRFSS 2018

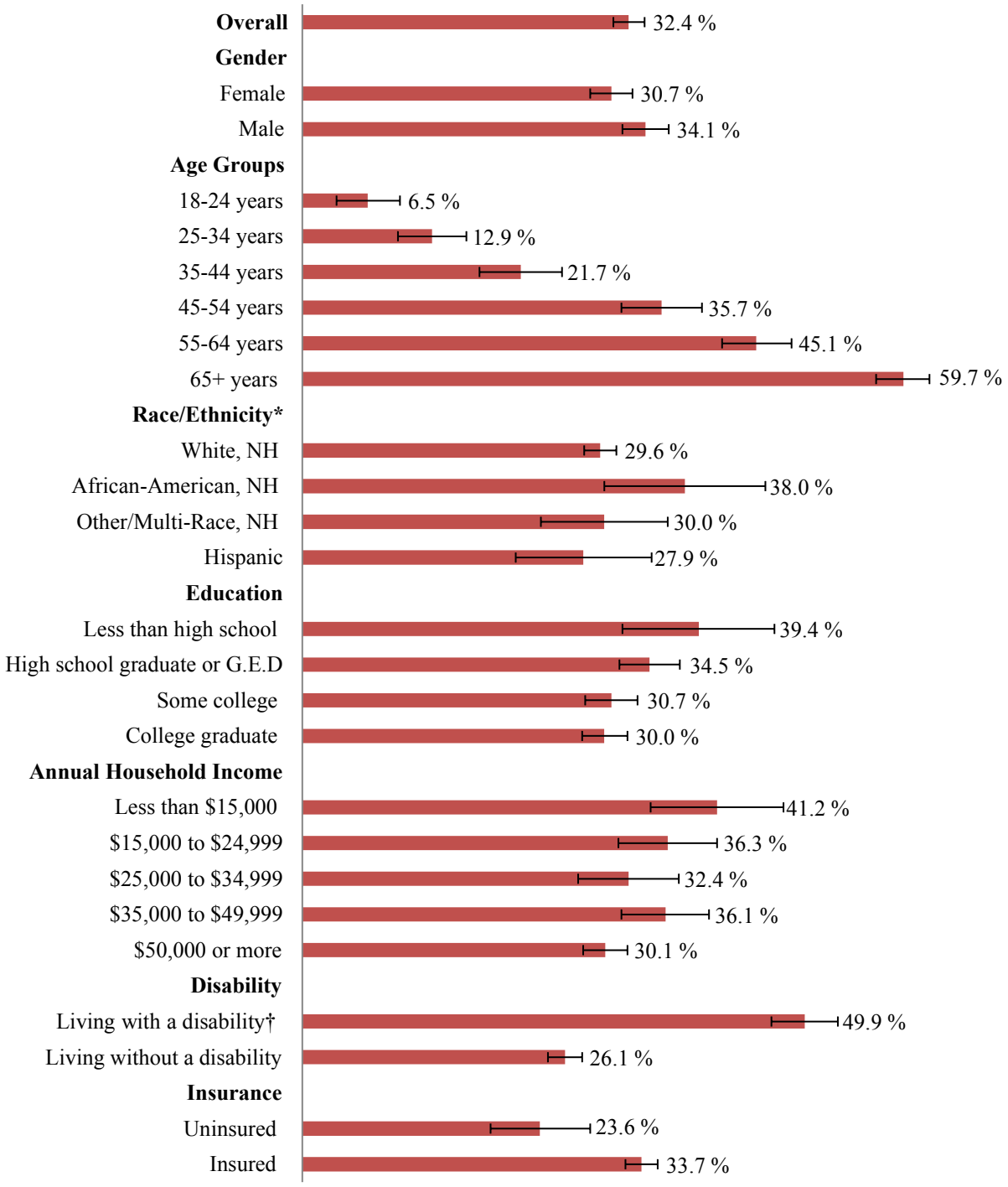
Demographic Characteristics	Weighted Percentage	95% CI
Overall	32.4	30.8-33.9
Gender		
Female	30.7	28.6-32.8
Male	34.1	31.8-36.4
Age Groups		
18-24 years	6.5	3.3-9.6
25-34 years	12.9	9.5-16.3
35-44 years	21.7	17.6-25.8
45-54 years	35.7	31.7-39.7
55-64 years	45.1	41.6-48.5
65+ years	59.7	57.1-62.4
Race/Ethnicity*		
White, NH	29.6	28.0-31.2
African-American, NH	38.0	30.0-46.0
Other/Multi-Race, NH	30.0	23.7-36.3
Hispanic	27.9	21.1-34.6
Education		
Less than high school	39.4	31.9-47.0
High school graduate or G.E.D	34.5	31.5-37.5
Some college	30.7	28.1-33.3
College graduate	30.0	27.7-32.2
Annual Household Income		
Less than $15,000	41.2	34.6-47.8
$15,000 to $24,999	36.3	31.4-41.2
$25,000 to $34,999	32.4	27.4-37.4
$35,000 to $49,999	36.1	31.8-40.5
$50,000 or more	30.1	27.9-32.3
Disability		
Living with a disability†	49.9	46.6-53.2
Living without a disability	26.1	24.4-27.8
Insurance		
Uninsured	23.6	18.6-28.5
Insured	33.7	32.1-35.3

*Prevalence estimates for race and ethnicity were age-adjusted to the U.S. 2000 standard population.

†Living with a disability: Respondents who have at least one of the six disability types (hearing, vision, cognition, mobility,self-care, and/or independent living).

Due to changes in BRFSS survey methodology 2011- 2018 BRFSS estimates cannot be compared with estimates from previous years. Please refer to Technical Notes for more information about BRFSS survey methodology.

Percentage of Adults Ages 18 Years and Older With Diagnosed Hypertension, KS BRFSS 2018



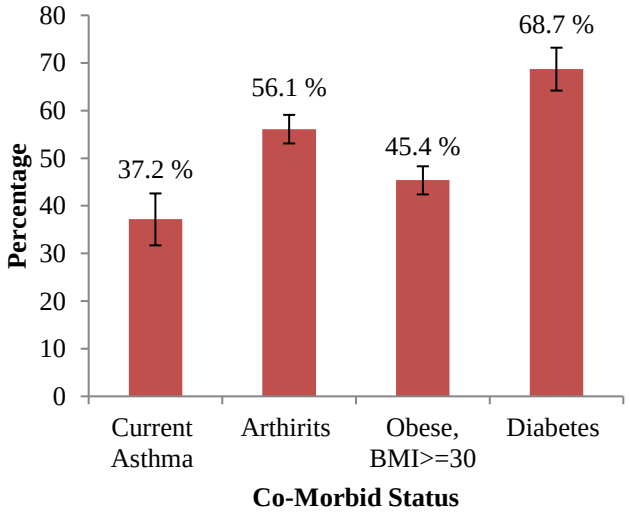
*Prevalence estimates for race and ethnicity were age-adjusted to the U.S. 2000 standard population.
†Living with a disability: Respondents who have at least one of the six disability types (hearing, vision, cognition, mobility, self-care, and/or independent living).

Due to changes in BRFSS survey methodology 2011- 2018 BRFSS estimates cannot be compared with estimates from previous years. Please refer to Technical Notes for more information about BRFSS survey methodology.

Percentage of Adults Ages 18 Years and Older With Diagnosed Hypertension by Co-Morbid Conditions, KS BRFSS 2018

Co-Morbid Conditions		Weighted Percentage	95% CI
Current Asthma			
	Yes	37.2	31.7-42.6
	No	31.6	30.0-33.2
Arthritis			
	Yes	56.1	53.1-59.1
	No	23.8	22.2-25.5
Weight			
	Normal or Underweight, BMI<25	20.1	17.7-22.4
	Overweight, 25<= BMI<30	30.1	27.6-32.7
	Obese, BMI>=30	45.4	42.4-48.3
Diabetes			
	Yes	68.7	64.2-73.2
	No	27.6	26.0-29.1

Percentage of Adults Ages 18 Years and Older With Diagnosed Hypertension, by Co-Morbid Conditions, KS BRFSS 2018



The percentage of Kansas adults ages 18 years and older who were ever diagnosed with hypertension was significantly **higher** among:

- Adults with arthritis compared with those without arthritis
- Adults who were obese compared with those who were not obese; and adults who were overweight compared with those who were normal/underweight
- Adults with diabetes compared with those without diabetes

The percentage of Kansas adults ages 18 years and older who were ever diagnosed with hypertension did not differ significantly by current asthma status.

SUMMARY

About 32.4 percent of Kansas adults ages 18 years and older have ever been diagnosed with hypertension. In addition, higher percentages of adults who have ever been diagnosed with hypertension were seen among: older adults, adults with an annual household income of less than $15,000, adults with insurance, those with co-morbid conditions (arthritis, diabetes, obesity) and those living with a disability.

The Healthy People 2020 objective is to reduce the proportion of adults with hypertension to 26.9 percent. Further public health efforts are needed to reach the objective and to address disparities in population subgroups in Kansas.

Due to changes in BRFSS survey methodology 2011- 2018 BRFSS estimates cannot be compared with estimates from previous years. Please refer to Technical Notes for more information about BRFSS survey methodology.

Chronic Health Conditions: Heart Disease

In 2018, the leading cause of death among Kansans was heart disease.[34] Heart disease refers to several different types of heart conditions, the most common being coronary artery disease.[35] Coronary artery disease can cause heart attacks, angina and heart failure.[36] In the U.S., coronary heart disease costs $108.9 billion each year.[37] One Healthy People 2020 goal for heart disease is to increase overall cardiovascular health in the U.S. population.

In 2018, approximately 1 in 25 Kansas adults ages 18 years and older had ever been diagnosed with heart disease. The percentage of Kansas adults ages 18 years and older that had ever been diagnosed with heart disease was significantly **higher** among:

- Males compared with females
- Older adults compared with younger adults
- Adults with an annual household income of less than $15,000 compared with adults with an annual household income of $50,000 or more
- Adults living with a disability compared with adults living without a disability
- Adults with insurance compared with adults with no insurance

The percentage of Kansas adults ages 18 years and older who had ever been diagnosed with heart disease did not differ significantly by race/ethnicity groups (age-adjusted prevalence) and education groups.

Percentage of Adults Ages 18 Years and Older With Diagnosed Heart Disease, KS BRFSS 2018

Demographic Characteristics	Weighted Percentage	95% CI
Overall	4.4	4.0-4.8
Gender		
Female	3.6	3.0-4.1
Male	5.3	4.7-5.9
Age Groups		
18-24 years	**	**
25-34 years	**	**
35-44 years	1.0	0.4-1.7
45-54 years	2.3	1.4-3.1
55-64 years	8.1	6.6-9.5
65+ years	11.5	10.4-12.7
Race/Ethnicity*		
White, NH	3.6	3.3-4.0
African-American, NH	4.3	2.3-6.3
Other/Multi-Race, NH	4.0	2.1-6.0
Hispanic	3.7	1.6-5.8
Education		
Less than high school	6.1	4.0-8.2
High school graduate or G.E.D	4.8	4.0-5.6
Some college	4.4	3.7-5.1
College graduate	3.5	3.0-4.1
Annual Household Income		
Less than $15,000	8.9	6.4-11.3
$15,000 to $24,999	6.1	4.6-7.5
$25,000 to $34,999	4.3	2.9-5.6
$35,000 to $49,999	5.1	3.7-6.6
$50,000 or more	3.1	2.7-3.6
Disability		
Living with a disability†	10.6	9.3-11.9
Living without a disability	2.3	2.0-2.7
Insurance		
Uninsured	2.9	1.7-4.1
Insured	4.7	4.2-5.1

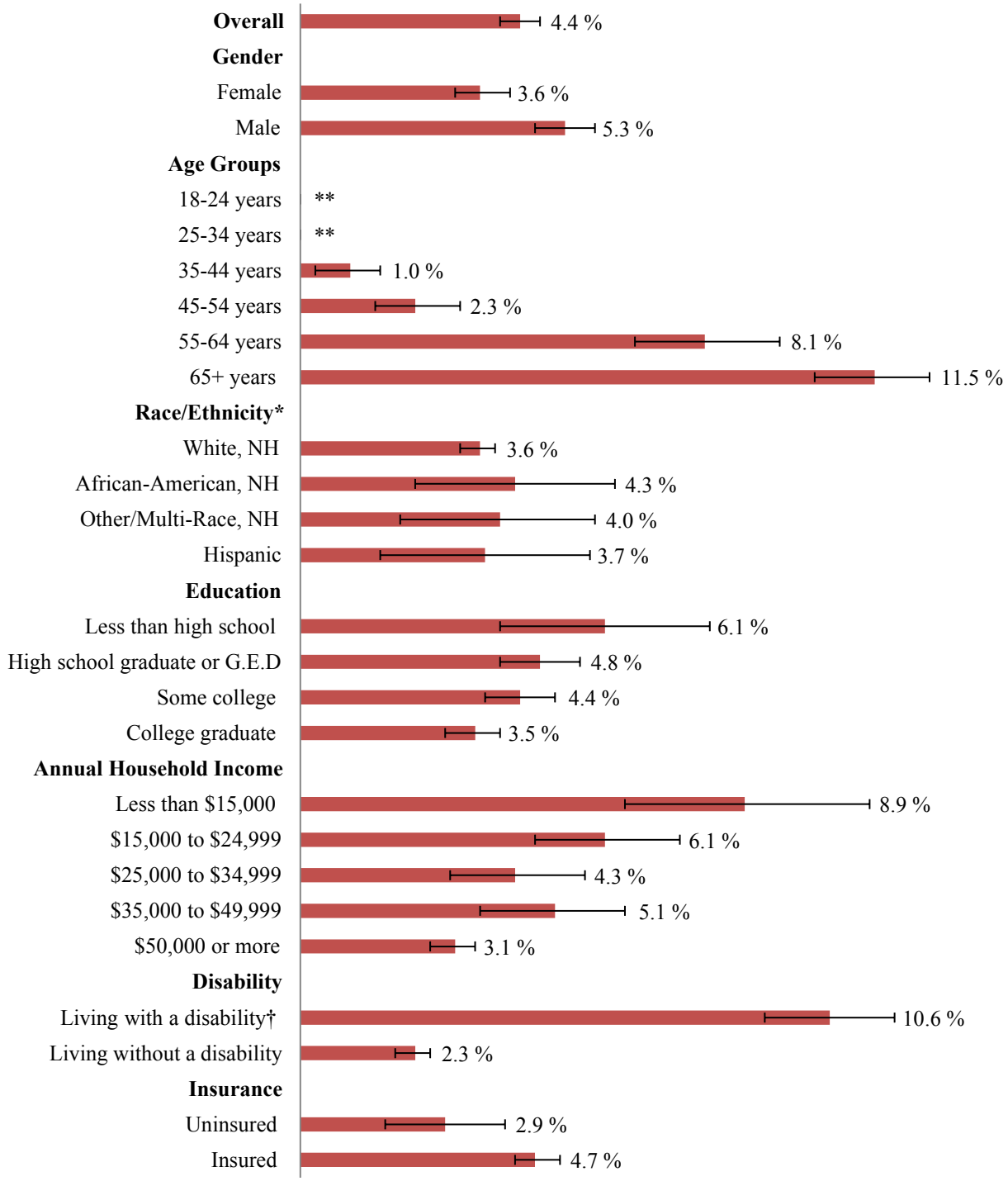
** Insufficient sample and/or statistically unreliable estimate.

*Prevalence estimates for race and ethnicity were age-adjusted to the U.S. 2000 standard population.

†Living with a disability: Respondents who have at least one of the six disability types (hearing, vision, cognition, mobility,self-care, and/or independent living).

Due to changes in BRFSS survey methodology 2011- 2018 BRFSS estimates cannot be compared with estimates from previous years. Please refer to Technical Notes for more information about BRFSS survey methodology.

Percentage of Adults Ages 18 Years and Older With Diagnosed Heart Disease, KS BRFSS 2018



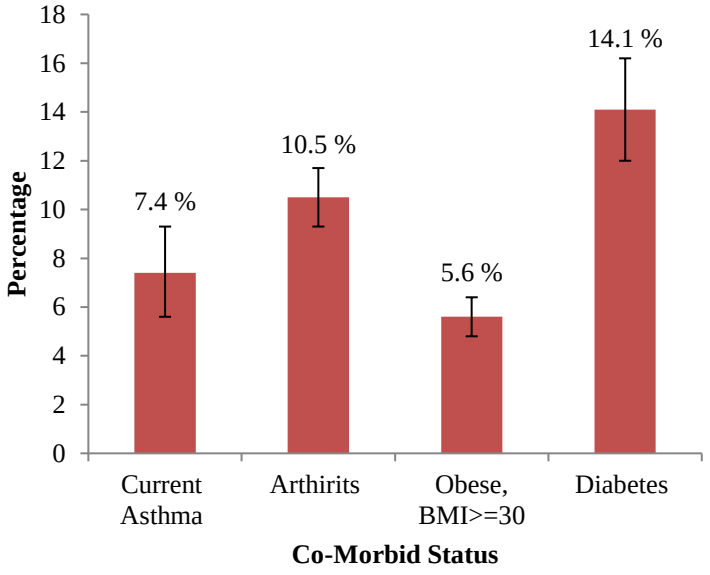
** Insufficient sample and/or statistically unreliable estimate.
*Prevalence estimates for race and ethnicity were age-adjusted to the U.S. 2000 standard population.
†Living with a disability: Respondents who have at least one of the six disability types (hearing, vision, cognition, mobility, self-care, and/or independent living).

Due to changes in BRFSS survey methodology 2011- 2018 BRFSS estimates cannot be compared with estimates from previous years. Please refer to Technical Notes for more information about BRFSS survey methodology.

Percentage of Adults Ages 18 Years and Older With Diagnosed Heart Disease by Co-Morbid Conditions, KS BRFSS 2018

Co-Morbid Conditions		Weighted Percentage	95% CI
Current Asthma			
	Yes	7.4	5.5-9.2
	No	4.1	3.7-4.5
Arthritis			
	Yes	10.5	9.3-11.7
	No	2.4	2.0-2.7
Weight			
	Normal or Underweight, BMI<25	3.8	3.0-4.6
	Overweight, 25<= BMI<30	4.4	3.7-5.1
	Obese, BMI>=30	5.6	4.8-6.4
Diabetes			
	Yes	14.1	12.0-16.2
	No	3.2	2.8-3.6

Percentage of Adults Ages 18 Years and Older With Diagnosed Heart Disease, by Co-Morbid Conditions, KS BRFSS 2018



The percentage of Kansas adults ages 18 years and older who were ever diagnosed with heart disease was significantly **higher** among:

- Adults with current asthma compared with those without current asthma
- Adults with arthritis compared with those without arthritis
- Adults who were obese compared with those who were normal weight/underweight
- Adults with diabetes compared with those without diabetes

SUMMARY

About 4.4 percent of Kansas adults ages 18 years and older have ever been diagnosed with heart disease. In addition, higher percentages of adults who have ever been diagnosed with heart disease were seen among: males, older adults, those who had lower income, those with insurance, those with co-morbid conditions (current asthma, arthritis, diabetes or obesity) or those living with a disability.

One Healthy People 2020 goal for heart disease is to increase overall cardiovascular health in the U.S. To address this, Kansas needs to reduce prevalence and risk factors of heart disease among adults ages 18 years and older as well as address associated disparities.

Due to changes in BRFSS survey methodology 2011- 2018 BRFSS estimates cannot be compared with estimates from previous years. Please refer to Technical Notes for more information about BRFSS survey methodology.

Chronic Health Conditions: Stroke

Stroke, also called cerebrovascular disease, occurs when the blood supply to the brain is abruptly interrupted. It is the fifth leading cause of death in the United States and in Kansas.[38,34] Stroke is a medical emergency and can lead to permanent disability and death. The Healthy People 2020 goal for stroke is to reduce the stroke deaths.

In 2018, approximately 1 in 30 Kansas adults ages 18 years and older had a stroke. The percentage of Kansas adults ages 18 years and older who had a stroke was significantly **higher** among:

- Older adults compared with younger adults
- Adults with lower education compared with adults in higher education groups
- Adults with annual household income less than $50,000 compared with adults with an annual household income of $50,000 or more
- Adults living with a disability compared with adults living without a disability

The percentage of Kansas adults ages 18 years and older who had a stroke did not differ significantly by gender, race/ethnicity groups (age-adjusted prevalence) or insurance status.

Percentage of Adults Ages 18 Years and Older Who Had a Stroke, KS BRFSS 2018

Demographic Characteristics	Weighted Percentage	95% CI
Overall	3.3	2.9-3.6
Gender		
Female	3.3	2.7-3.8
Male	3.3	2.7-3.8
Age Groups		
18-24 years	**	**
25-34 years	**	**
35-44 years	**	**
45-54 years	2.5	1.6-3.4
55-64 years	4.5	3.3-5.7
65+ years	7.7	6.7-8.7
Race/Ethnicity*		
White, NH	2.6	2.3-3.0
African-American, NH	4.4	2.2-6.6
Other/Multi-Race, NH	4.6	2.3-6.9
Hispanic	2.3	1.0-3.7
Education		
Less than high school	5.9	3.8-8.1
High school graduate or G.E.D	3.8	3.1-4.6
Some college	3.3	2.7-3.9
College graduate	1.8	1.4-2.1
Annual Household Income		
Less than $15,000	7.7	5.5-9.9
$15,000 to $24,999	5.9	4.3-7.4
$25,000 to $34,999	4.4	2.9-5.9
$35,000 to $49,999	3.3	2.1-4.5
$50,000 or more	1.4	1.0-1.7
Disability		
Living with a disability†	8.3	7.1-9.5
Living without a disability	1.4	1.1-1.7
Insurance		
Uninsured	2.7	1.6-3.8
Insured	3.3	2.9-3.7

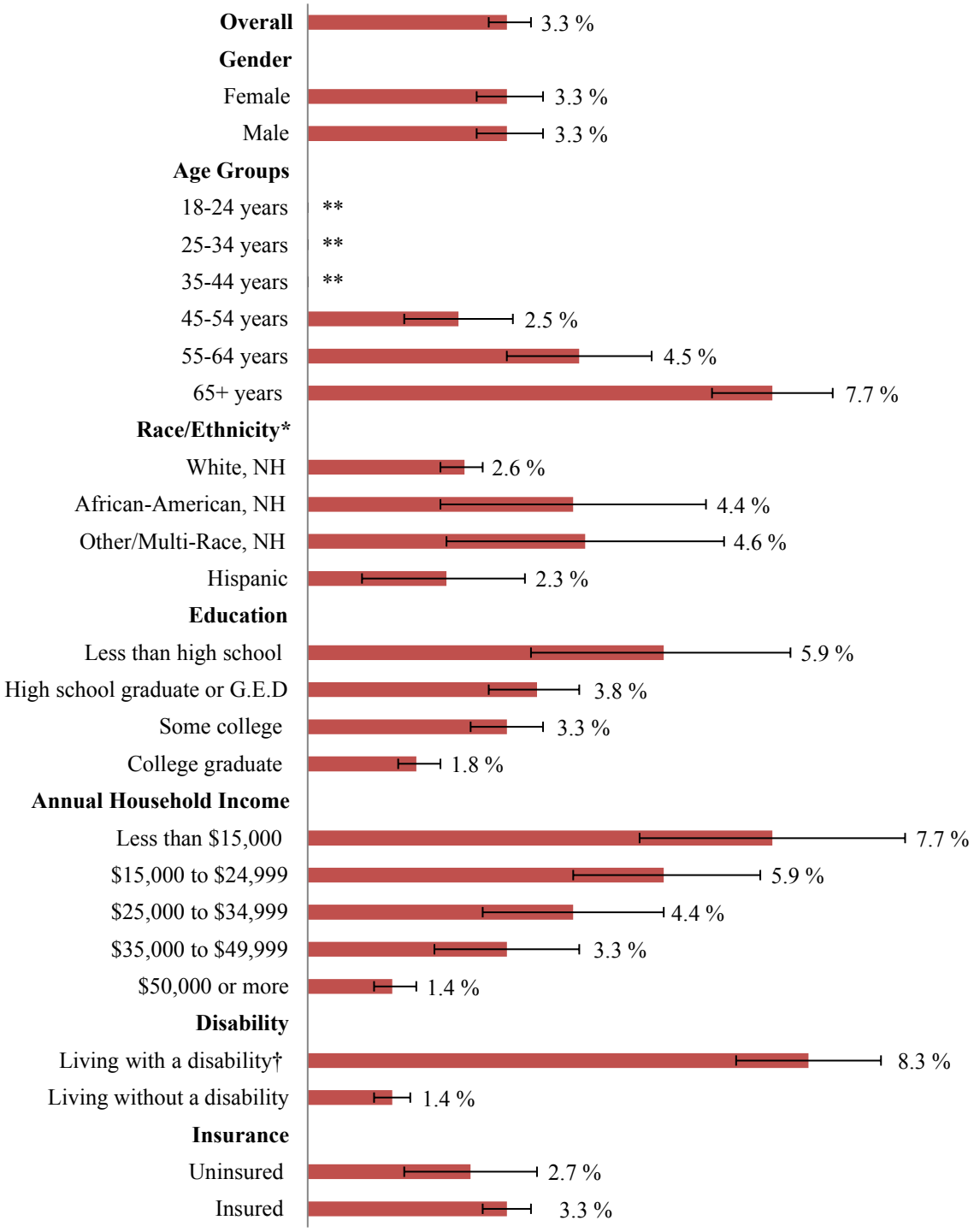
** Insufficient sample and/or statistically unreliable estimate.

*Prevalence estimates for race and ethnicity were age-adjusted to the U.S. 2000 standard population.

†Living with a disability: Respondents who have at least one of the six disability types (hearing, vision, cognition, mobility,self-care, and/or independent living).

Due to changes in BRFSS survey methodology 2011- 2018 BRFSS estimates cannot be compared with estimates from previous years. Please refer to Technical Notes for more information about BRFSS survey methodology.

Percentage of Adults Ages 18 Years and Older Who Had a Stroke, KS BRFSS 2018



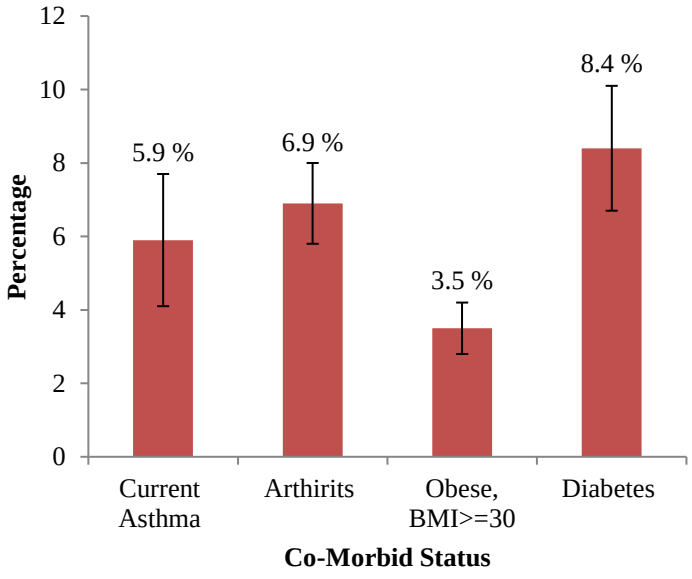
** Insufficient sample and/or statistically unreliable estimate.
*Prevalence estimates for race and ethnicity were age-adjusted to the U.S. 2000 standard population.
†Living with a disability: Respondents who have at least one of the six disability types (hearing, vision, cognition, mobility, self-care, and/or independent living).

Due to changes in BRFSS survey methodology 2011- 2018 BRFSS estimates cannot be compared with estimates from previous years. Please refer to Technical Notes for more information about BRFSS survey methodology.

Percentage of Adults Ages 18 Years and Older Who Had a Stroke by Co-Morbid Conditions, KS BRFSS 2018

Co-Morbid Conditions	Weighted Percentage	95% CI
Current Asthma		
Yes	5.9	4.1-7.7
No	2.9	2.6-3.3
Arthritis		
Yes	6.9	5.8-8.0
No	2.0	1.7-2.4
Weight		
Normal or Underweight, BMI<25	3.1	2.4-3.8
Overweight, 25<= BMI<30	3.1	2.5-3.8
Obese, BMI>=30	3.5	2.8-4.2
Diabetes		
Yes	8.4	6.7-10.1
No	2.6	2.2-2.9

Percentage of Adults Ages 18 Years and Older Who Had a Stroke, by Co-Morbid Conditions, KS BRFSS 2018



The percentage of Kansas adults ages 18 years and older who had a stroke was significantly **higher** among:

- Adults with current asthma compared with those without current asthma
- Adults with arthritis compared with those without arthritis
- Adults with diabetes compared with those without diabetes

The percentage of Kansas adults ages 18 years and older who had a stroke did not differ significantly by weight categories.

SUMMARY

Approximately 3.3 percent of Kansas adults ages 18 years and older had a stroke. In addition, higher percentages of adults who had a stroke were seen among: older adults, those with lower education and income, those with co-morbid conditions (current asthma, arthritis or diabetes) and those living with a disability.

The Healthy People 2020 goal for stroke is to reduce deaths due to stroke. Therefore, to reduce prevalence of stroke among adults ages 18 years and older and to address associated disparities, further public health efforts are needed in Kansas.

Due to changes in BRFSS survey methodology 2011- 2018 BRFSS estimates cannot be compared with estimates from previous years. Please refer to Technical Notes for more information about BRFSS survey methodology.

Chronic Health Conditions: Cancer

In 2018, the second leading cause of death among Kansans was cancer.[34] Yet, many cancers are preventable by reducing risk factors such as tobacco use, physical inactivity, poor nutrition and obesity.[39] It is important to continue to monitor cancer prevalence in Kansas. Healthy People 2020 has several objectives related to reducing the death rate of specific types of cancers, such as lung, uterine cervical, female breast, colorectal and prostate cancer.

In 2018, approximately 1 in 14 Kansas adults ages 18 years and older had ever been diagnosed with cancer (excluding skin cancer). The percentage of Kansas adults ages 18 years and older who were ever diagnosed with cancer (excluding skin cancer) was significantly **higher** among:

- Females compared with males
- Older adults compared with younger adults
- Adults with an annual household income of $25,000 to less than $50,000 compared with adults with an annual household income of $50,000 or more
- Adults living with a disability compared with adults living without a disability
- Adults with insurance compared with adults with no insurance

The percentage of Kansas adults ages 18 years and older who were ever diagnosed with cancer (excluding skin cancer) did not differ significantly by race/ethnicity groups (age-adjusted) or education groups.

Percentage of Adults Ages 18 Years and Older With Diagnosed Cancer, KS BRFSS 2018

Demographic Characteristics	Weighted Percentage	95% CI
Overall	7.1	6.6-7.6
Gender		
Female	8.5	7.8-9.3
Male	5.6	4.9-6.2
Age Groups		
18-24 years	**	**
25-34 years	2.1	1.1-3.0
35-44 years	3.0	1.9-4.1
45-54 years	4.1	3.1-5.1
55-64 years	9.5	8.1-10.9
65+ years	18.6	17.2-20.0
Race/Ethnicity*		
White, NH	6.2	5.7-6.7
African-American, NH	6.5	4.4-8.7
Other/Multi-Race, NH	6.0	3.7-8.3
Hispanic	4.5	2.5-6.5
Education		
Less than high school	7.0	4.9-9.1
High school graduate or G.E.D	6.7	5.8-7.7
Some college	7.2	6.4-8.1
College graduate	7.2	6.4-8.0
Annual Household Income		
Less than $15,000	8.2	6.0-10.4
$15,000 to $24,999	7.8	6.2-9.4
$25,000 to $34,999	8.3	6.6-10.0
$35,000 to $49,999	10.0	8.4-11.6
$50,000 or more	5.7	5.0-6.3
Disability		
Living with a disability†	12.1	10.8-13.5
Living without a disability	5.4	4.9-5.8
Insurance		
Uninsured	3.3	2.1-4.5
Insured	7.6	7.1-8.2

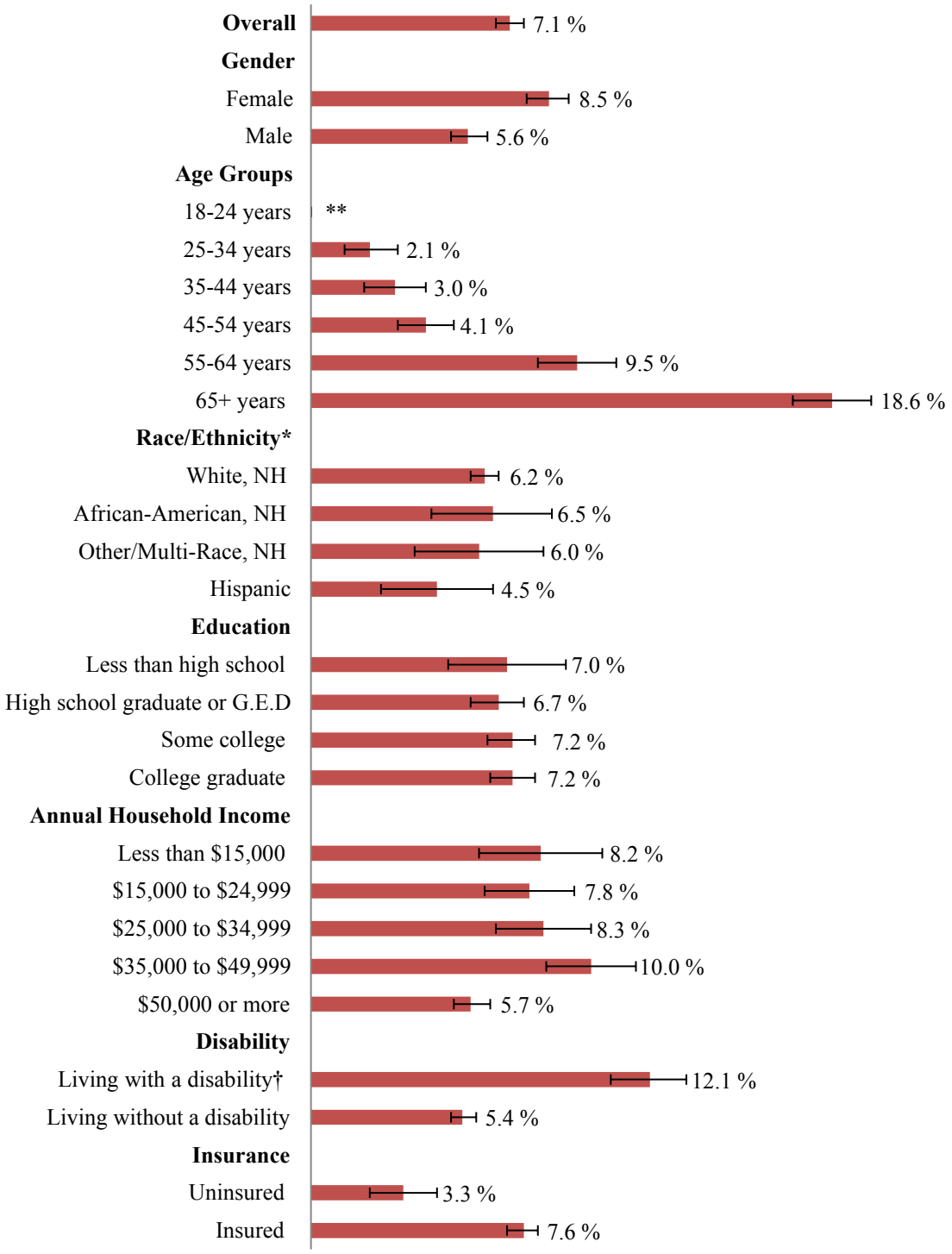
** Insufficient sample and/or statistically unreliable estimate.

*Prevalence estimates for race and ethnicity were age-adjusted to the U.S. 2000 standard population.

†Living with a disability: Respondents who have at least one of the six disability types (hearing, vision, cognition, mobility,self-care, and/or independent living).

Due to changes in BRFSS survey methodology 2011- 2018 BRFSS estimates cannot be compared with estimates from previous years. Please refer to Technical Notes for more information about BRFSS survey methodology.

Percentage of Adults Ages 18 Years and Older With Diagnosed Cancer, KS BRFSS 2018



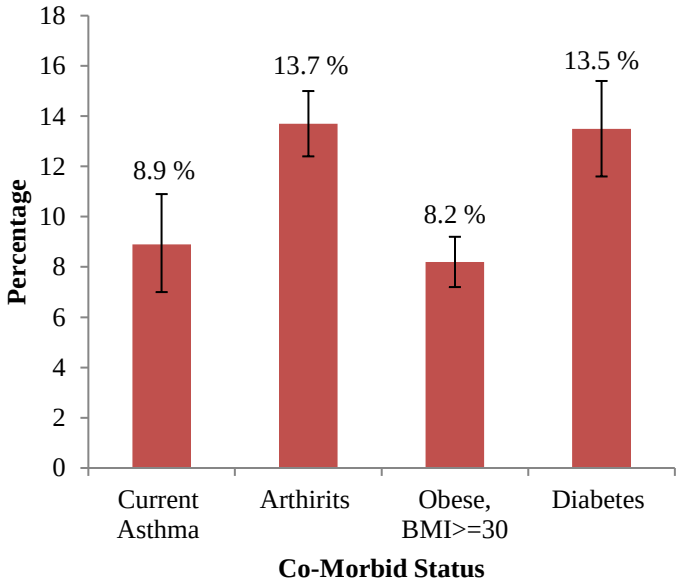
** Insufficient sample and/or statistically unreliable estimate.
*Prevalence estimates for race and ethnicity were age-adjusted to the U.S. 2000 standard population.
†Living with a disability: Respondents who have at least one of the six disability types (hearing, vision, cognition, mobility, self-care, and/or independent living).

Due to changes in BRFSS survey methodology 2011- 2018 BRFSS estimates cannot be compared with estimates from previous years. Please refer to Technical Notes for more information about BRFSS survey methodology.

Percentage of Adults Ages 18 Years and Older With Diagnosed Cancer by Co-Morbid Conditions, KS BRFSS 2018

Co-Morbid Conditions		Weighted Percentage	95% CI
Current Asthma			
	Yes	8.9	6.9-10.8
	No	6.9	6.3-7.4
Arthritis			
	Yes	13.7	12.4-15.0
	No	4.8	4.3-5.3
Weight			
	Normal or Underweight, BMI<25	5.8	5.0-6.6
	Overweight, 25<= BMI<30	7.4	6.5-8.3
	Obese, BMI>=30	8.2	7.2-9.2
Diabetes			
	Yes	13.5	11.6-15.4
	No	6.2	5.7-6.7

Percentage of Adults Ages 18 Years and Older With Diagnosed Cancer, by Co-Morbid Conditions, KS BRFSS 2018



The percentage of Kansas adults ages 18 years and older who were ever diagnosed with cancer (excluding skin cancer) was significantly **higher** among:

- Adults with arthritis compared with those without arthritis
- Adults who were obese compared with those who were normal weight/underweight
- Adults with diabetes compared with those without diabetes

The percentage of Kansas adults ages 18 years and older who were ever diagnosed with cancer (excluding skin cancer) did not differ significantly by current asthma status.

SUMMARY

Approximately 7.1 percent of Kansas adults ages 18 years and older have ever been diagnosed with cancer (excluding skin cancer). In addition, higher percentages of adults who have ever been diagnosed with cancer (excluding skin cancer) were seen among: females, older adults, adults with annual household income of $25,000 income to less than $50,000, those with insurance, adults with co-morbid conditions (arthritis, diabetes or obesity) and those living with a disability.

To reduce prevalence of cancer among adults ages 18 years and older and to address associated disparities, further public health efforts are needed in Kansas.

Due to changes in BRFSS survey methodology 2011- 2018 BRFSS estimates cannot be compared with estimates from previous years. Please refer to Technical Notes for more information about BRFSS survey methodology.

Chronic Health Conditions: Skin Cancer

In the U.S., the most common type of cancer is skin cancer.[40] The deadliest kind of skin cancer is melanoma and is caused by exposure to ultraviolet (UV) light.[41] Therefore, it is important to reduce UV exposure and track the prevalence of skin cancer. The Healthy People 2020 goals for skin cancer are to reduce the melanoma cancer death rate and to increase the proportions of people who participate in behaviors that reduce their exposure to harmful UV irradiation and avoid sunburn.

In 2018, approximately 1 in 16 Kansas adults ages 18 years and older had ever been diagnosed with skin cancer. The percentage of Kansas adults ages 18 years and older who were ever diagnosed with skin cancer was significantly **higher** among:

- Older adults compared with younger adults
- Non-Hispanic whites compared with non-Hispanic other/multi-race adults (age-adjusted prevalence)
- Adults living with a disability compared with adults living without a disability
- Adults with insurance compared with adults with no insurance

The percentage of Kansas adults ages 18 years and older who were ever diagnosed with skin cancer did not differ significantly by gender, education or income status.

Percentage of Adults Ages 18 Years and Older With Diagnosed Skin Cancer, KS BRFSS 2018

Demographic Characteristics	Weighted Percentage	95% CI
Overall	6.4	6.0-6.9
Gender		
Female	6.0	5.4-6.6
Male	6.9	6.2-7.6
Age Groups		
18-24 years	**	**
25-34 years	**	**
35-44 years	1.4	0.7-2.0
45-54 years	4.0	2.9-5.1
55-64 years	8.9	7.6-10.2
65+ years	18.5	17.2-19.9
Race/Ethnicity*		
White, NH	6.0	5.5-6.4
African-American, NH	**	**
Other/Multi-Race, NH	3.4	1.6-5.2
Hispanic	**	**
Education		
Less than high school	5.5	3.7-7.3
High school graduate or G.E.D	6.3	5.5-7.2
Some college	5.9	5.2-6.7
College graduate	7.5	6.7-8.2
Annual Household Income		
Less than $15,000	4.8	3.0-6.6
$15,000 to $24,999	5.6	4.4-6.7
$25,000 to $34,999	7.9	6.0-9.8
$35,000 to $49,999	7.4	6.1-8.7
$50,000 or more	6.2	5.5-6.8
Disability		
Living with a disability†	10.0	8.9-11.1
Living without a disability	5.3	4.8-5.8
Insurance		
Uninsured	2.8	1.6-3.9
Insured	7.0	6.5-7.5

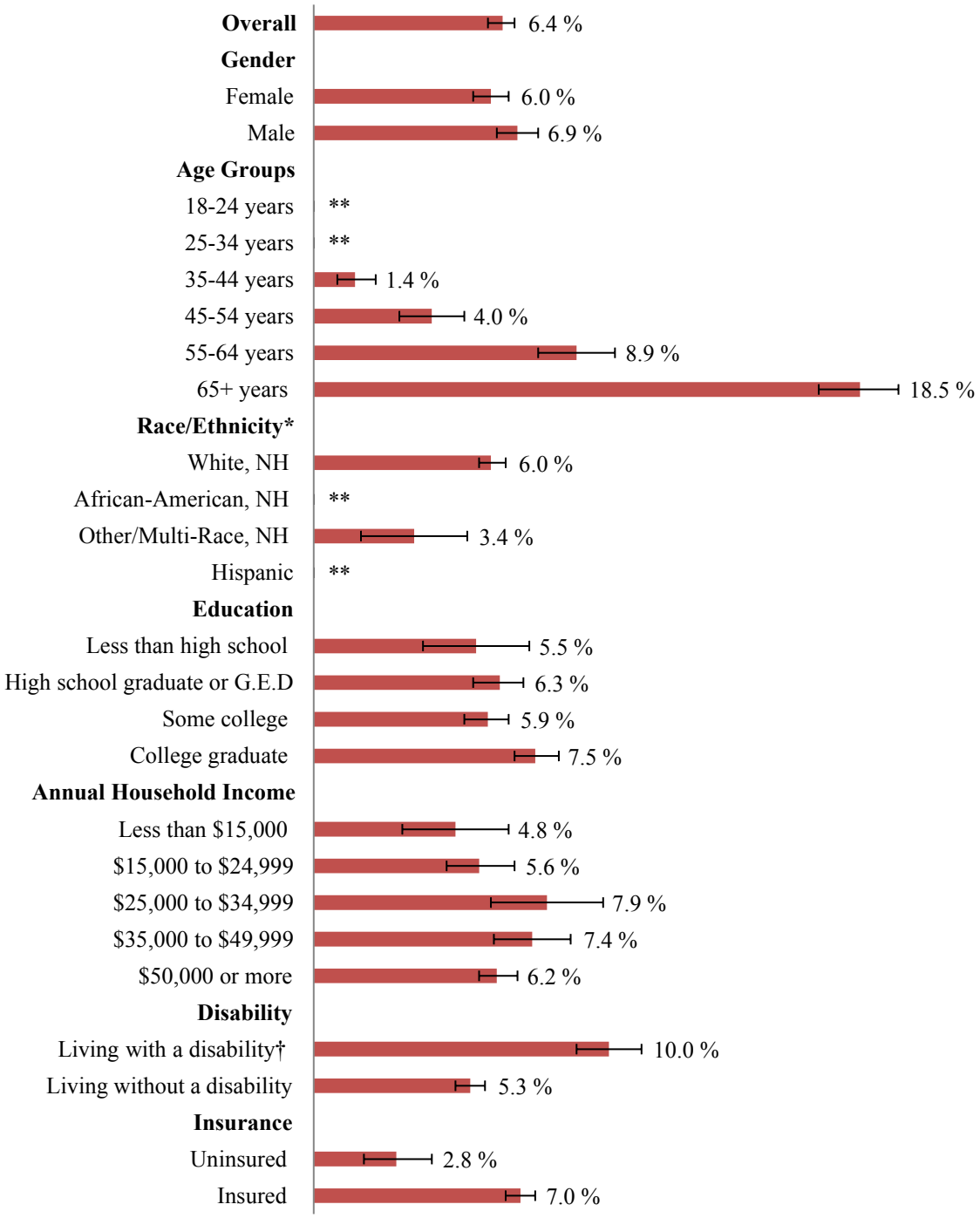
** Insufficient sample and/or statistically unreliable estimate.

*Prevalence estimates for race and ethnicity were age-adjusted to the U.S. 2000 standard population.

†Living with a disability: Respondents who have at least one of the six disability types (hearing, vision, cognition, mobility,self-care, and/or independent living).

Due to changes in BRFSS survey methodology 2011- 2018 BRFSS estimates cannot be compared with estimates from previous years. Please refer to Technical Notes for more information about BRFSS survey methodology.

Percentage of Adults Ages 18 Years and Older With Diagnosed Skin Cancer, KS BRFSS 2018



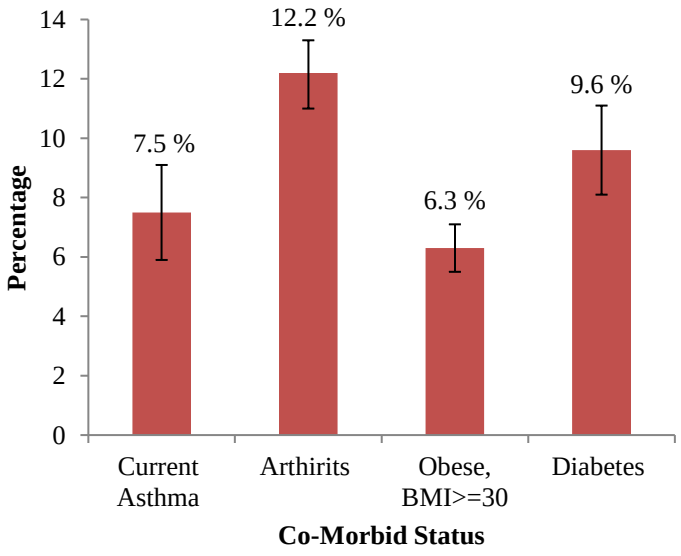
** Insufficient sample and/or statistically unreliable estimate.
*Prevalence estimates for race and ethnicity were age-adjusted to the U.S. 2000 standard population.
†Living with a disability: Respondents who have at least one of the six disability types (hearing, vision, cognition, mobility, self-care, and/or independent living).

Due to changes in BRFSS survey methodology 2011- 2018 BRFSS estimates cannot be compared with estimates from previous years. Please refer to Technical Notes for more information about BRFSS survey methodology.

Percentage of Adults Ages18 Years and Older With Diagnosed Skin Cancer by Co-Morbid Conditions, KS BRFSS 2018

Co-Morbid Conditions		Weighted Percentage	95% CI
Current Asthma			
	Yes	7.5	5.9-9.1
	No	6.3	5.9-6.8
Arthritis			
	Yes	12.2	11.1-13.4
	No	4.4	4.0-4.9
Weight			
	Normal or Underweight, BMI<25	6.3	5.4-7.1
	Overweight, 25<= BMI<30	7.1	6.3-8.0
	Obese, BMI>=30	6.3	5.5-7.1
Diabetes			
	Yes	9.6	8.1-11.1
	No	6.0	5.6-6.5

Percentage of Adults Ages 18 Years and Older With Diagnosed Skin Cancer, by Co-Morbid Conditions, KS BRFSS 2018



The percentage of Kansas adults ages 18 years and older who were ever diagnosed with skin cancer was significantly **higher** among:

- Adults with arthritis compared with those without arthritis
- Adults with diabetes compared with those without diabetes

The percentage of Kansas adults ages 18 years and older who were ever diagnosed with skin cancer did not differ significantly by current asthma status or weight categories.

SUMMARY

Approximately 6.3 percent of Kansas adults ages 18 years and older have ever been diagnosed with skin cancer. In addition, higher percentages of adults who have ever been diagnosed with skin cancer were seen among: older adults, non-Hispanic whites, those with insurance, adults with co-morbid conditions (arthritis or diabetes) and adults living with a disability.

To reduce prevalence of skin cancer among adults ages 18 years and older and to address associated disparities, further public health efforts are needed in Kansas.

Due to changes in BRFSS survey methodology 2011- 2018 BRFSS estimates cannot be compared with estimates from previous years. Please refer to Technical Notes for more information about BRFSS survey methodology.

Technical Notes

Behavioral Risk Factor Surveillance System (BRFSS)

BRFSS is the world's largest annual population-based survey system, tracking adult's health conditions and risk behaviors in the United States since 1984. It is coordinated by the Centers for Disease Control and Prevention (CDC) and is conducted in every state and several U.S. territories. The Kansas Department of Health and Environment (KDHE), Bureau of Health Promotion (BHP) conducted the first BRFSS survey in Kansas in 1990 as a point-in-time survey. Since 1992, BHP has conducted the Kansas BRFSS survey annually, thus providing the ability to examine the burden and monitor the trends of various diseases and risk factors/behaviors. BRFSS is the only source of population-based data for several public health indicators in Kansas. The 2018 Kansas BRFSS was conducted among non-institutionalized adults ages18 years and older living in private residences and college housings with landline and/or cell phone service.

For the 2018 Kansas BRFSS survey, the target total (combined landline and cell phone sample) sample size was 10,000 complete interviews with a target of 3,500 complete interviews for the landline telephone survey component (35% of total sample) and 6,500 complete interviews for the cellular telephone survey component (65% of total sample).

Weighted data analysis was conducted to estimate overall prevalence of the specific indicators in relation to Healthy People 2020 (i.e. risk factors, diseases and behaviors among adults ages 18 years and older in Kansas). Stratified analyses was done to examine burden of the Healthy People 2020 indicators within different population subgroups based on socio-demographic factors, risk behaviors and co-morbid conditions.

Several considerations should be taken into account when interpreting BRFSS estimates:

- The prevalence estimates from 2018 Kansas BRFSS are representative of non-institutionalized adults ages18 years and older living in private residences and college housings with landline and/or cell phone service.
- BRFSS estimates do not apply to individuals residing in residences without telephone service and those who reside on military bases, prisons or nursing homes.
- Due to changes in survey design and weighting methodology in 2011, comparisons cannot be made between the prevalence estimates generated for previous years and those generated for 2011, 2012, 2013, 2014, 2015, 2016, 2017 and 2018.

For more information on BRFSS methodology, visit www.kdheks.gov/brfss/technotes.html.

In 2018, 2017 and 2016, a six-item set of questions identified disability in hearing, vision, cognition, mobility, self-care, and independent living for all states. Respondents who responded "yes" to at least one of the six functional disability questions were identified as adults living with a disability.

Due to changes in BRFSS survey methodology 2011- 2018 BRFSS estimates cannot be compared with estimates from previous years. Please refer to Technical Notes for more information about BRFSS survey methodology.

For more information on disability questions: please visit

https://www.cdc.gov/brfss/data_documentation/pdf/BRFSS_Data_Users_Guide_on_Disability_Questions_2018-508.pdf

Please visit the BRFSS questionnaires below to see the questions on specific topics:

- 2018 Kansas BRFSS: http://www.kdheks.gov/brfss/PDF/ks2018svy.pdf
- 2017 Kansas BRFSS: http://www.kdheks.gov/brfss/PDF/ks2017svy.pdf
- 2016 Kansas BRFSS: http://www.kdheks.gov/brfss/PDF/ks2016svy.pdf
- 2015 Kansas BRFSS: http://www.kdheks.gov/brfss/PDF/ks2015svy.pdf

Age-adjustment:

Age-adjustment is a statistical method for standardizing prevalence estimates for groups that have different underlying age distributions thus making them more comparable. Age-adjusted prevalence estimates should be used to compare groups if the underlying population distribution is different or changes over time (for example, comparing estimates for veterans and civilians). Age-adjusted prevalence estimates should be understood as relative indices, not as actual measures of burden, and should not be compared with unadjusted prevalence estimates.

All age-adjusted prevalence estimates in this report are computed using the direct method. Briefly, prevalence estimates are first computed within each age group stratum. The products of each age-specific rate multiplied by the proportion of the 2000 U.S. Standard Population in that age category are summed across the age group strata.

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