

Obesity in Delaware

The State of Our Weight: 2015



DELAWARE HEALTH AND SOCIAL SERVICES

Division of Public Health

Health Promotion and Disease Prevention

Data Sources:



Behavioral Risk Factor Survey

- Ongoing mixed-mode telephone survey of adults 18 and older, annual $n = \sim 4,000$



Youth Risk Behavior Survey



- School-based survey, conducted in odd-numbered years; $n = \sim 3,000$ Delaware public high school students



Caveats:

- All data are self-reported.
- The BRFSS landline sample does not include adults living in institutions.
- Sample sizes can be an issue. Cells with fewer than 50 respondents are suppressed.
- Correlation does not mean nor imply causation.

Body Mass Index (BMI) $BMI = \frac{\text{Weight in Kilograms}}{(\text{Height in Meters}) \times (\text{Height in Meters})}$

- BMI was originally described as “appropriate for *population* studies and inappropriate for individual evaluation.”
- It is the best measure for use in telephone surveys.
- BMI in phone surveys slightly under-estimates weight due to self-reporting error.

BMI Categories

<18 = underweight

18 - ≤25 = normal or healthy weight

25 > - ≤30 = overweight

>30 = obese [>35 = very obese]

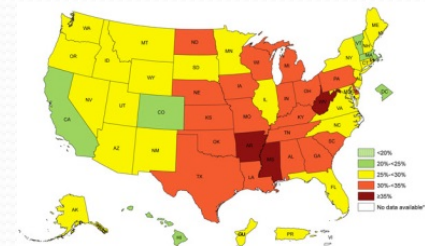




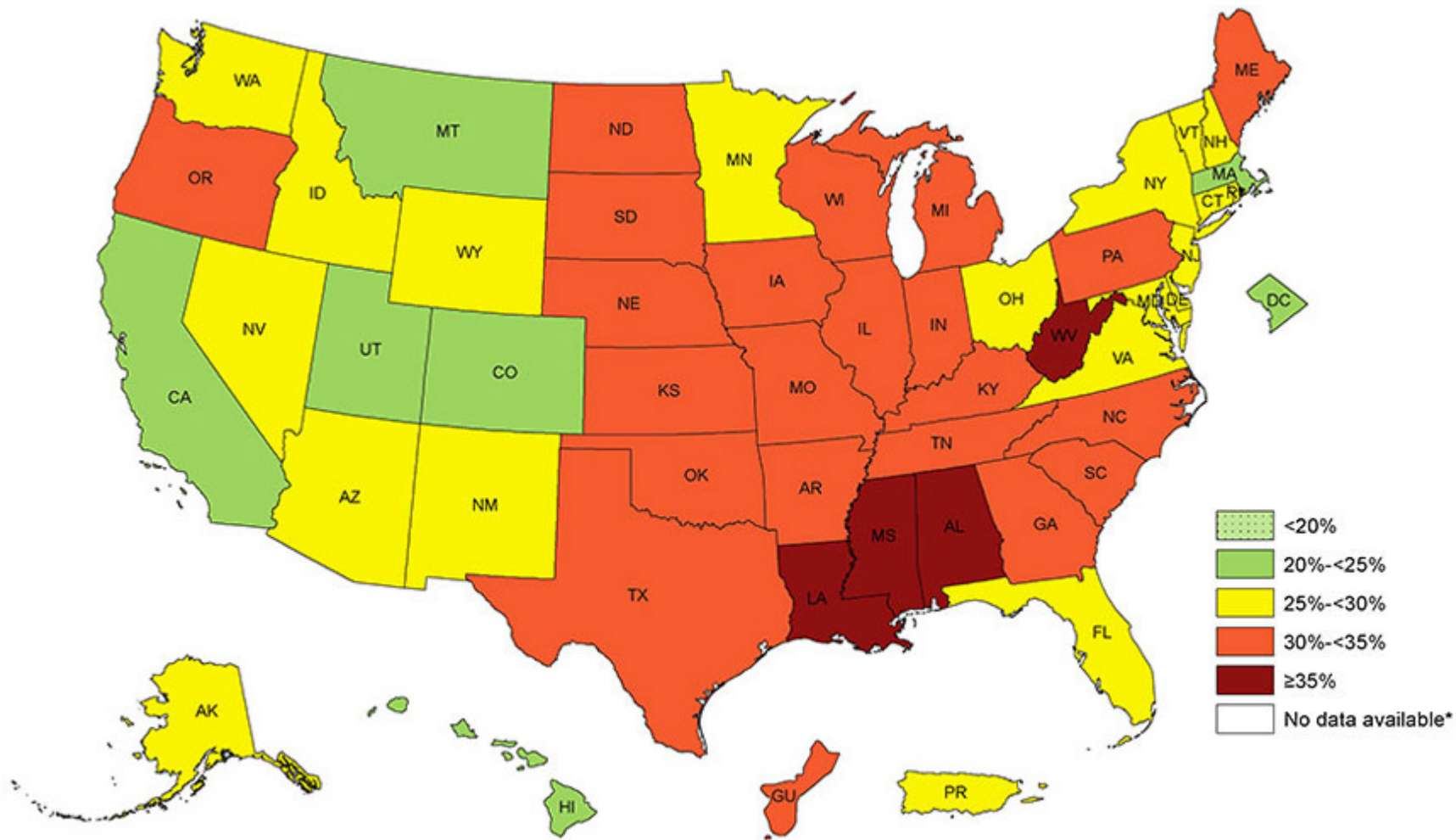
Delaware's adult obesity prevalence has been close to the national BRFSS median for several years.

- In 2015, Delaware's adult obesity prevalence was **29.7%** (CI = 27.6 – 31.8%).
- In 2015, the national median among all states was **29.8%**.

Source: CDC, Behavioral Risk Factor Surveillance System (BRFSS), 2015.

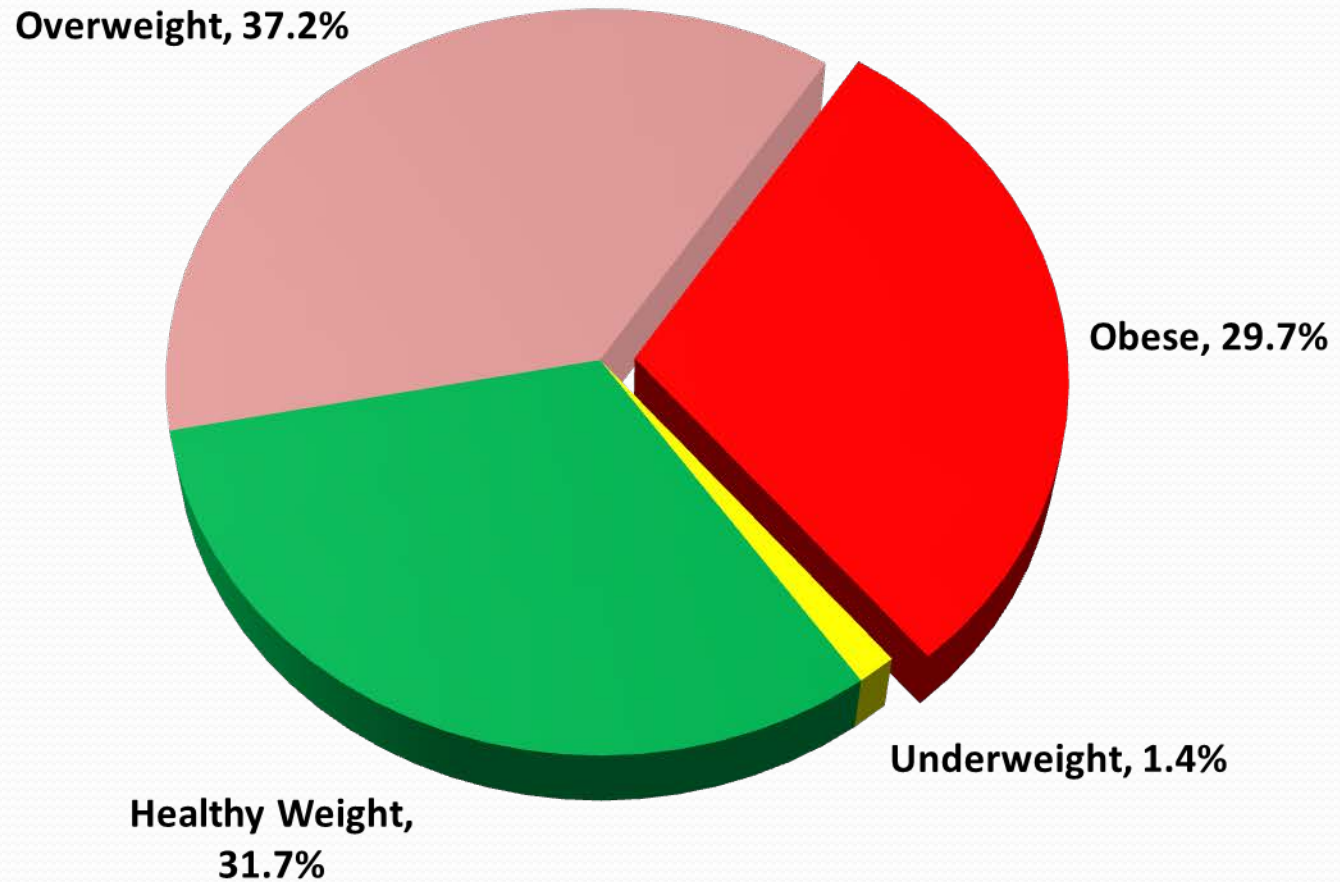


Prevalence of Self-Reported Obesity Among U.S. Adults by State and Territory, 2015



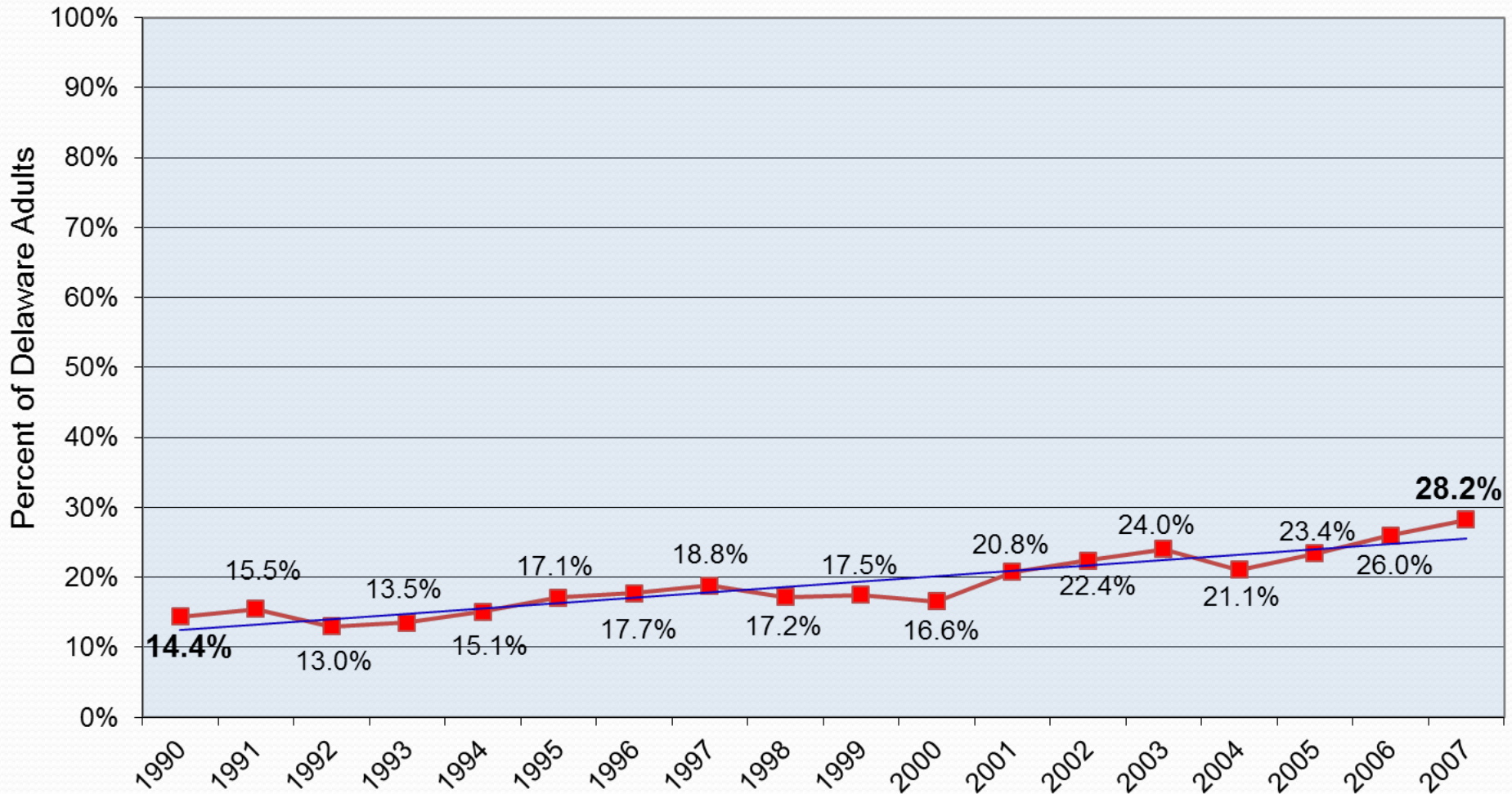
Source: USPHS, CDC, Behavioral Risk Factor Surveillance System (BRFSS), 2015

Percent of Adult Population in Each Weight Category by BMI, Delaware 2015



Source: Delaware Health & Social Services, Division of Public Health, Behavioral Risk Factor Survey (BRFS), 2015.

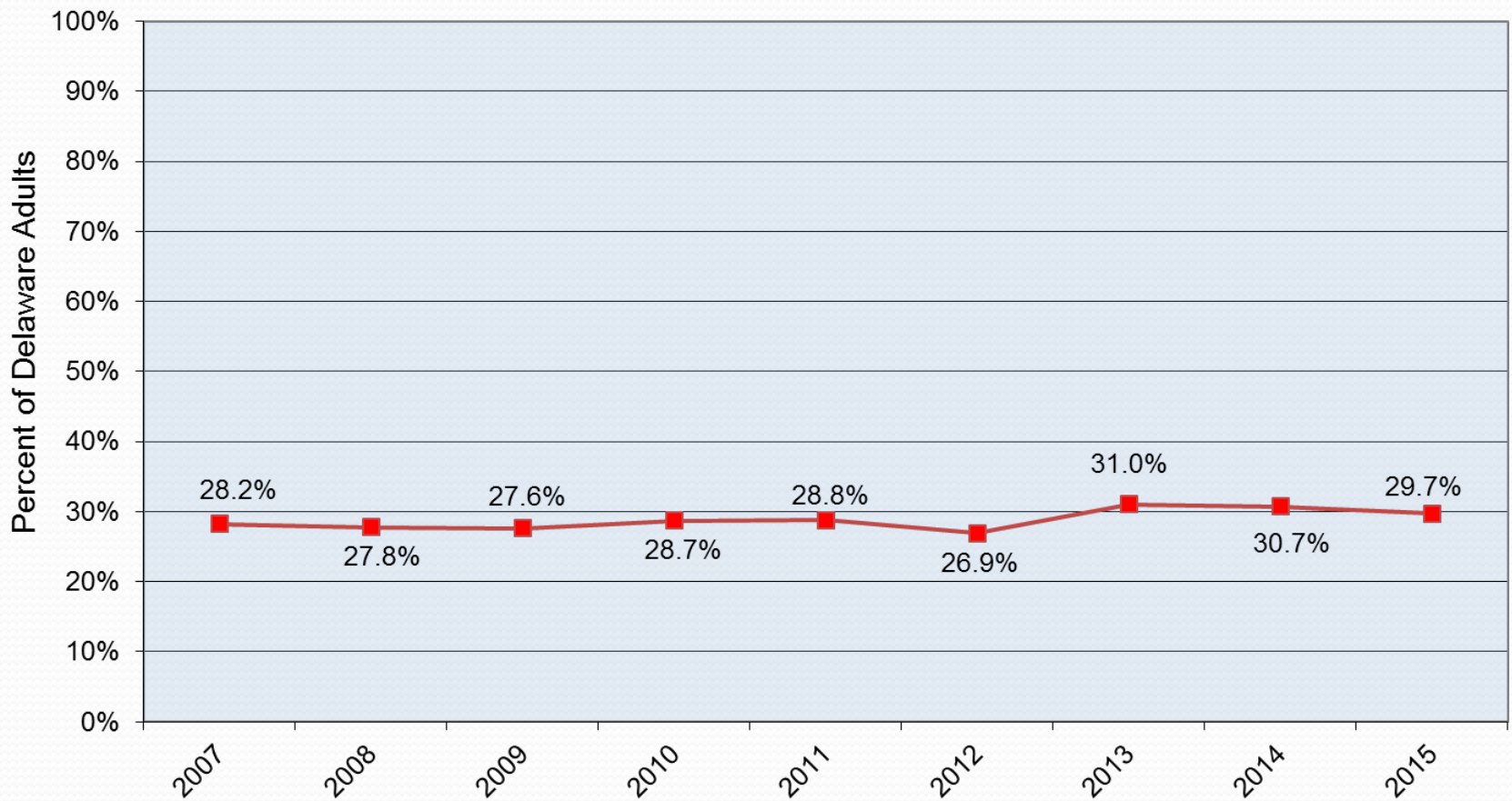
Obesity Among Delaware Adults Doubled Between 1990 and 2007



Source: Delaware Health & Social Services, Division of Public Health, Behavioral Risk Factor Survey (BRFS), 1990-2007.

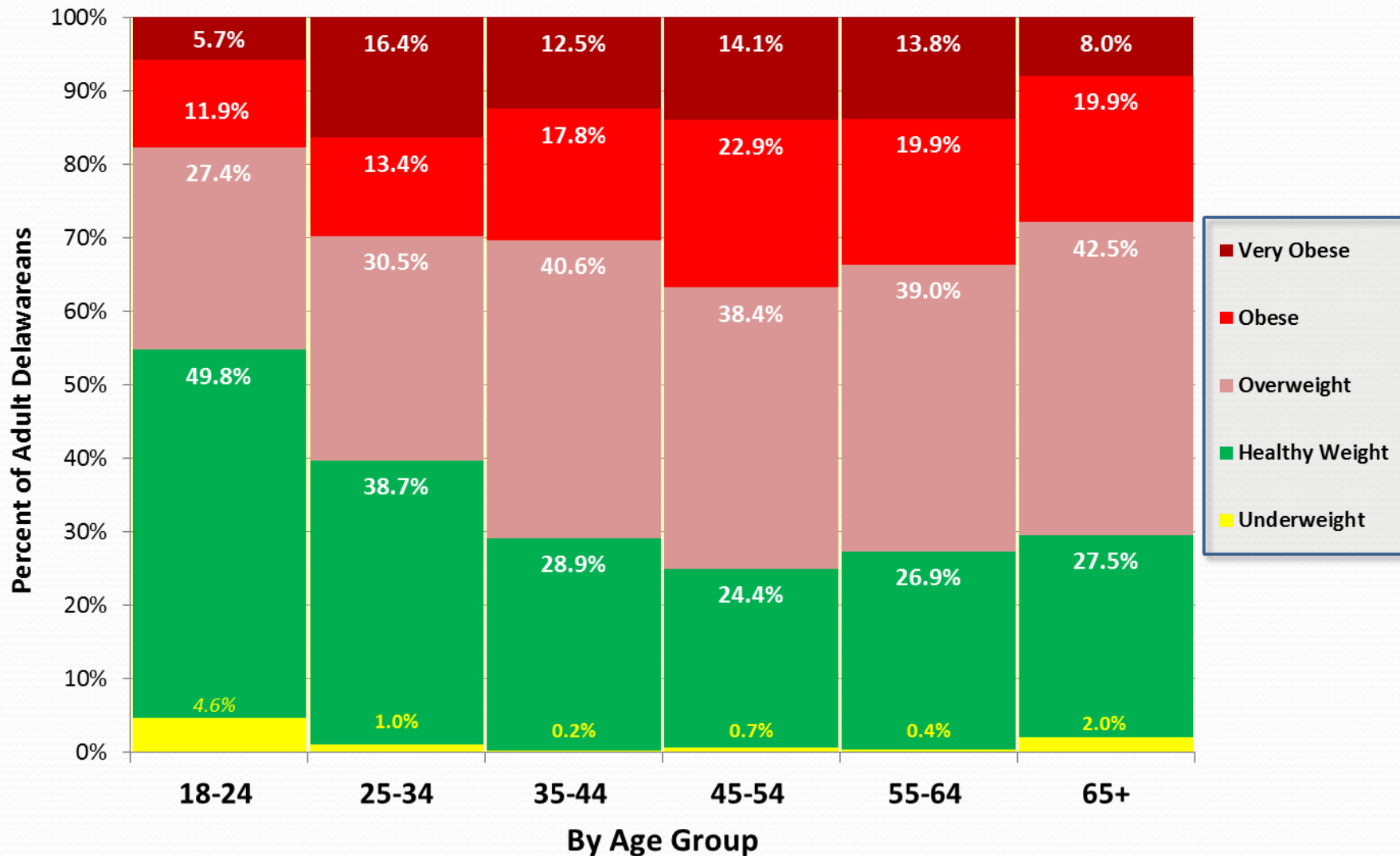
Some good news – trend level for 9 years

Obesity Among Delaware Adults: 2007 - 2015 Trend



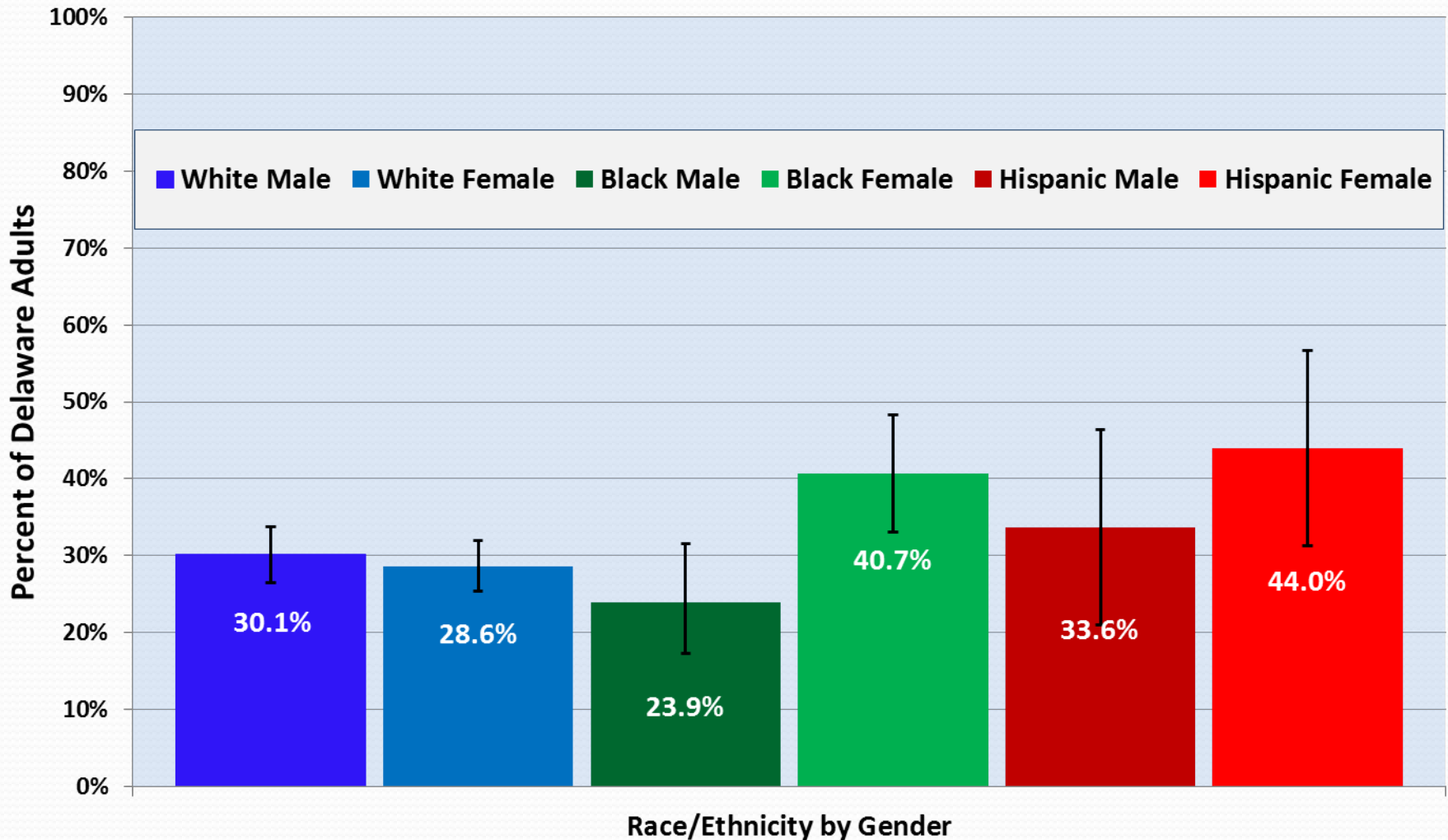
Source: Delaware Health & Social Services, Division of Public Health, Behavioral Risk Factor Survey (BRFS), 2007-2015.

Percent of Delaware Adults In Each Weight Category Using BMI, by Age Group, 2015



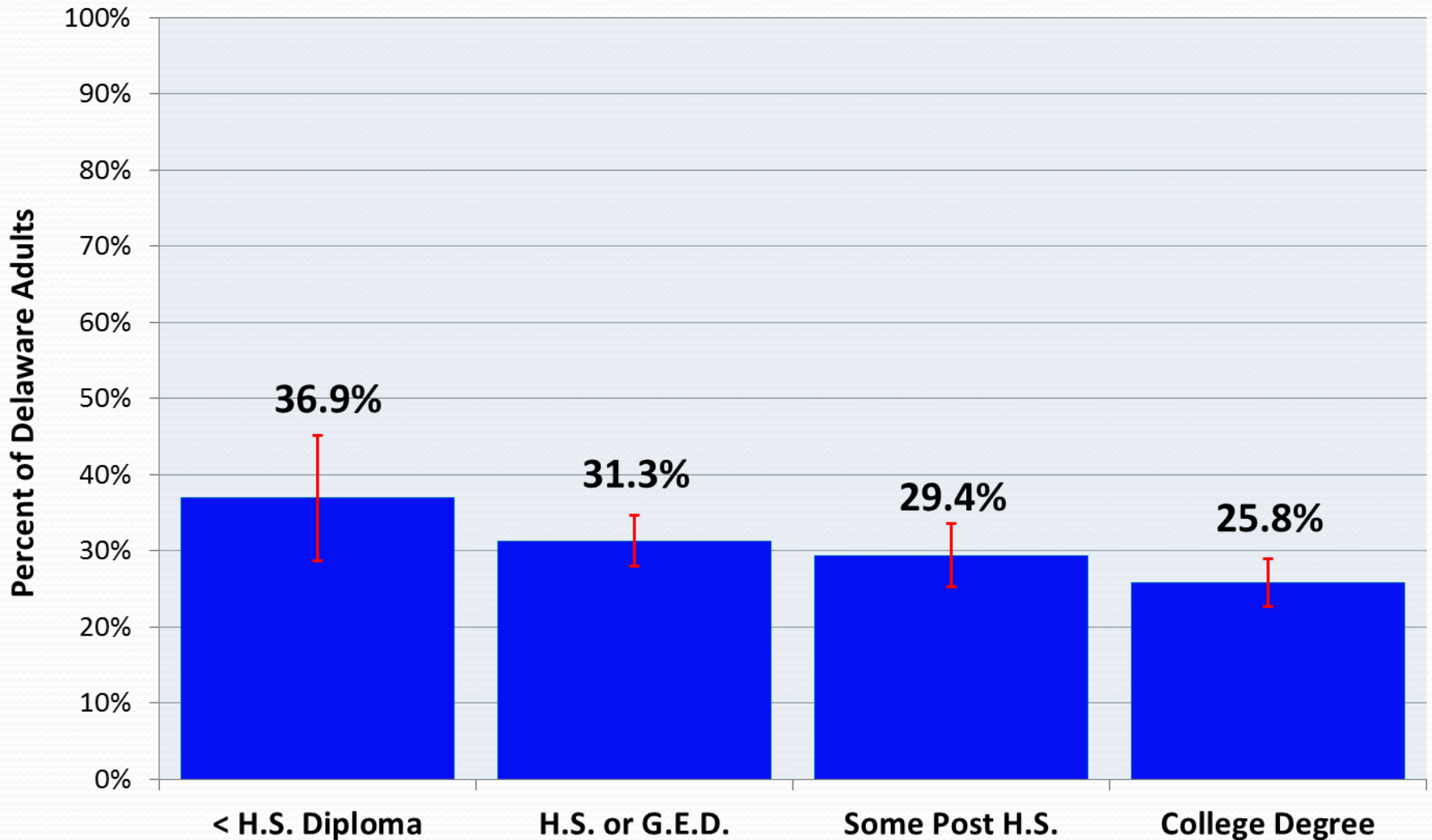
Source: Delaware Health & Social Services, Division of Public Health, Behavioral Risk Factor Survey (BRFS), 2015.

2015 Adult Obesity Prevalence in Delaware By Race/Ethnicity and Gender



Source: Delaware Health & Social Services, Division of Public Health, Behavioral Risk Factor Survey (BRFS), 2015.

Obesity Among Delaware Adults, by Educational Level, 2015



Source: Delaware Health & Social Services, Division of Public Health, Behavioral Risk Factor Survey (BRFS), 2015.

People with disabilities:

- **39.8%** of Delaware adults with disabilities are obese,
- compared with **26.8%** of adults without disabilities.



DELAWARE

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EXPIRES

Mental health:

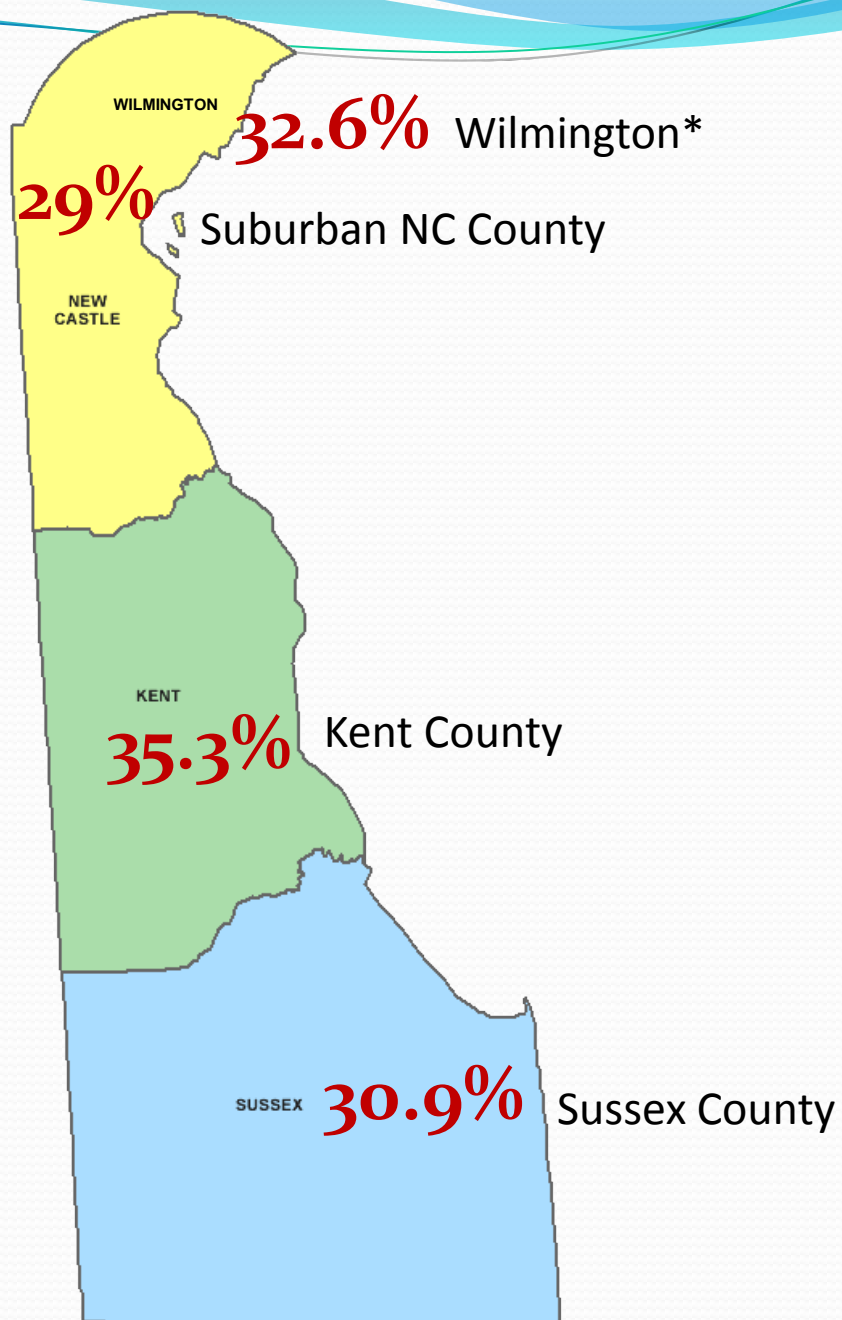
- Delaware adults who report being diagnosed with **depressive disorders** are almost **1.5 times** more likely to be obese than adults without depression.
- **39.7%** of adults with depression report BMIs considered obese, compared to **27.7%** of adults without depression.



Adult Obesity Prevalence By County and Wilmington, Aggregated 2013-2014 BRFs Data

Source: Delaware Health & Social Services, Division of Public Health, Behavioral Risk Factor Survey (BRFS), 2013-14.

*Wilmington data estimate combines three ZIP Codes: 19801, 19802 and 19805.



Healthy Weight & Overweight Among Delaware Adults, 2015

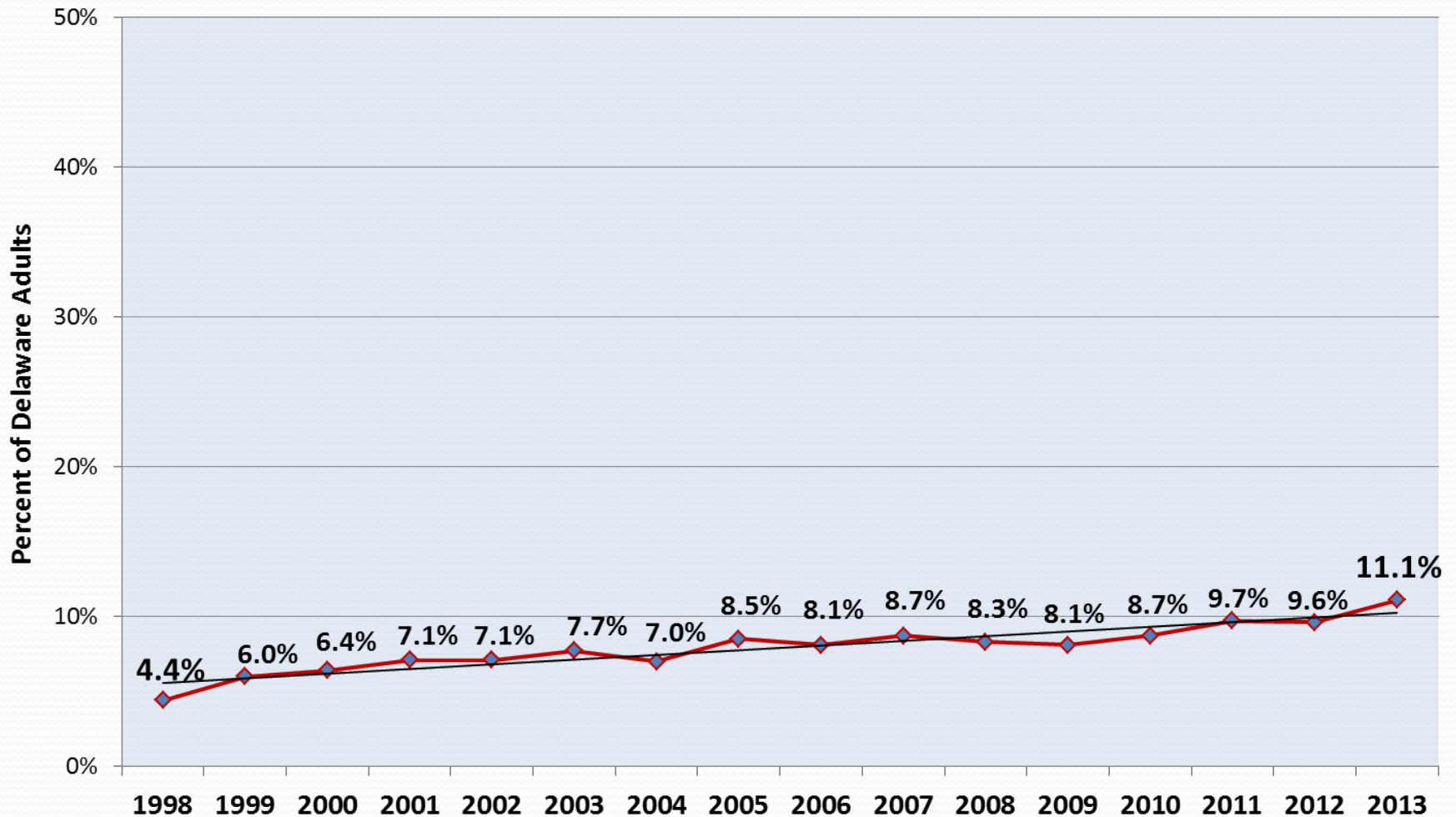
- 36.9% = overweight
- 37.2% = healthy weight

There have been no statistically significant changes in prevalence in either category since 2011.

Prevalence
trends for
diagnosed
diabetes
parallel
obesity trends

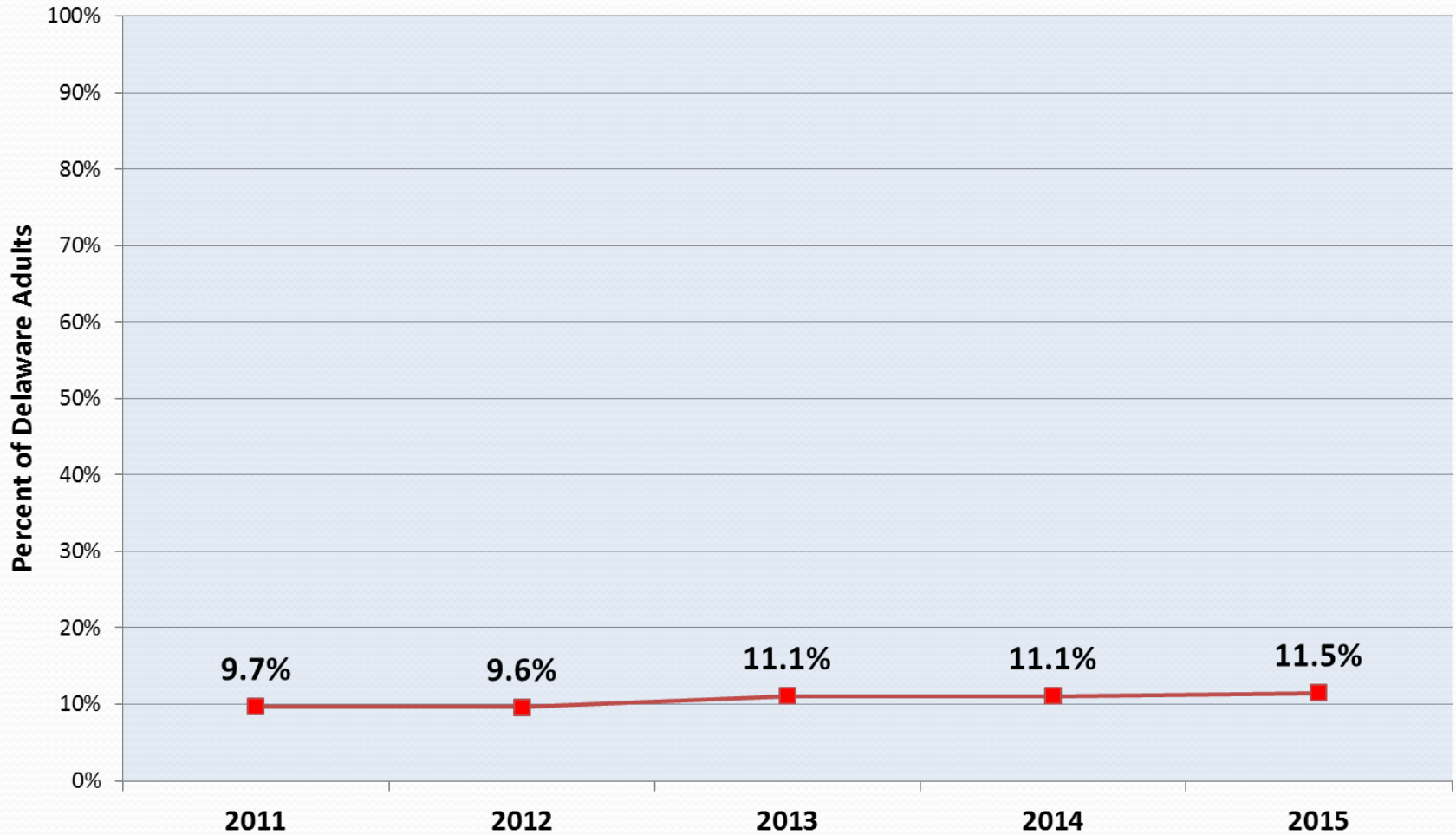


Prevalence of Diagnosed Diabetes Doubled Among Delaware Adults, 1998 - 2013



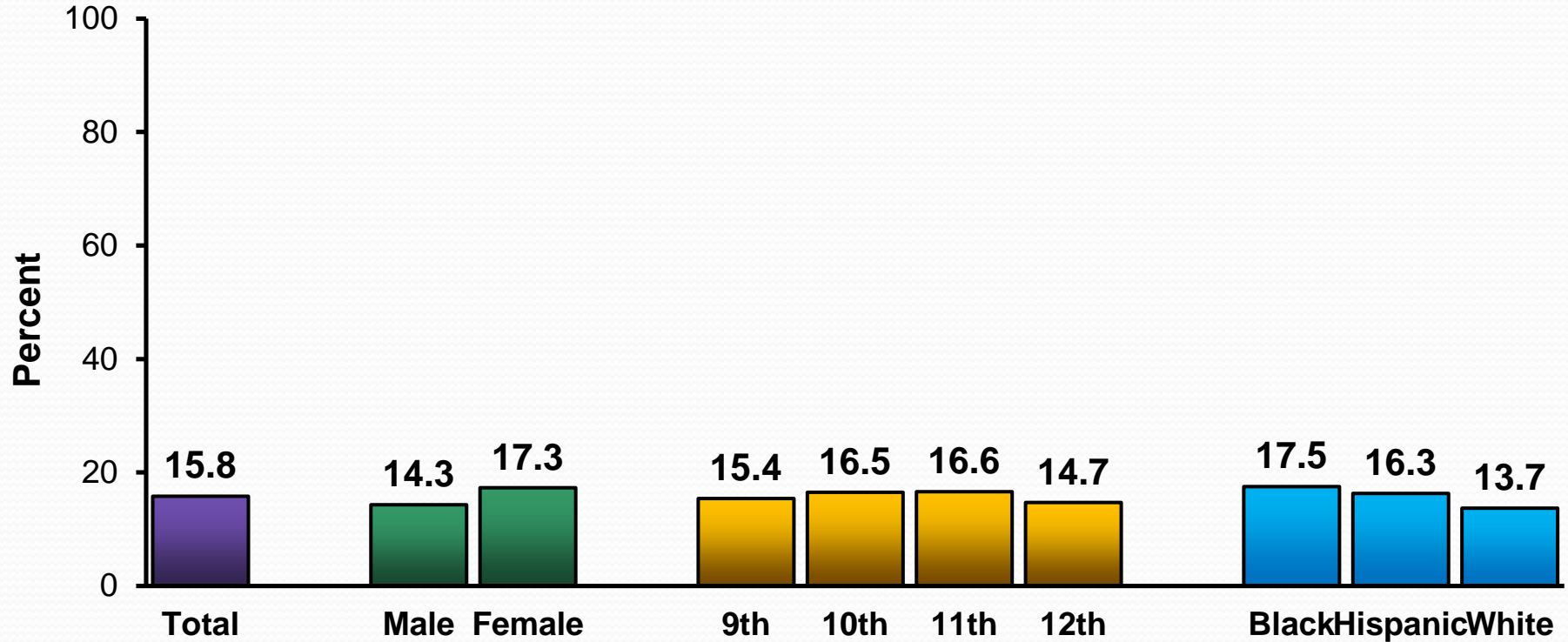
Source: Delaware Health & Social Services, Division of Public Health, Behavioral Risk Factor Survey (BRFS), 1998-2013.

Prevalence of Diagnosed Diabetes Among Delaware Adults, 2011 - 2015



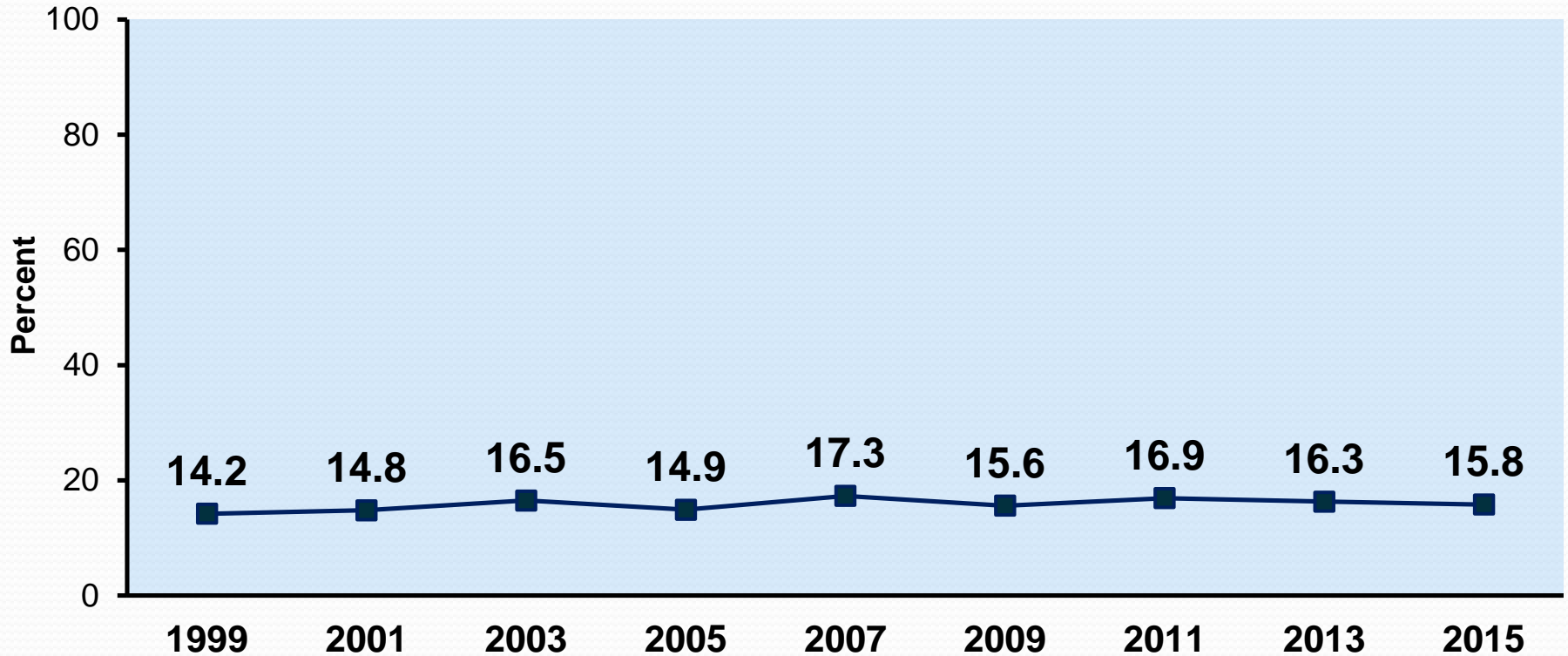
Source: Delaware Health & Social Services, Division of Public Health, Behavioral Risk Factor Survey (BRFS), 2000-2015.

Percentage of DE High School Students Who Were Overweight,* by Sex, Grade, and Race/Ethnicity, 2015



* \geq 85th percentile but $<$ 95th percentile for Body Mass Index, based on sex- and age-specific reference data from the 2000 CDC growth charts

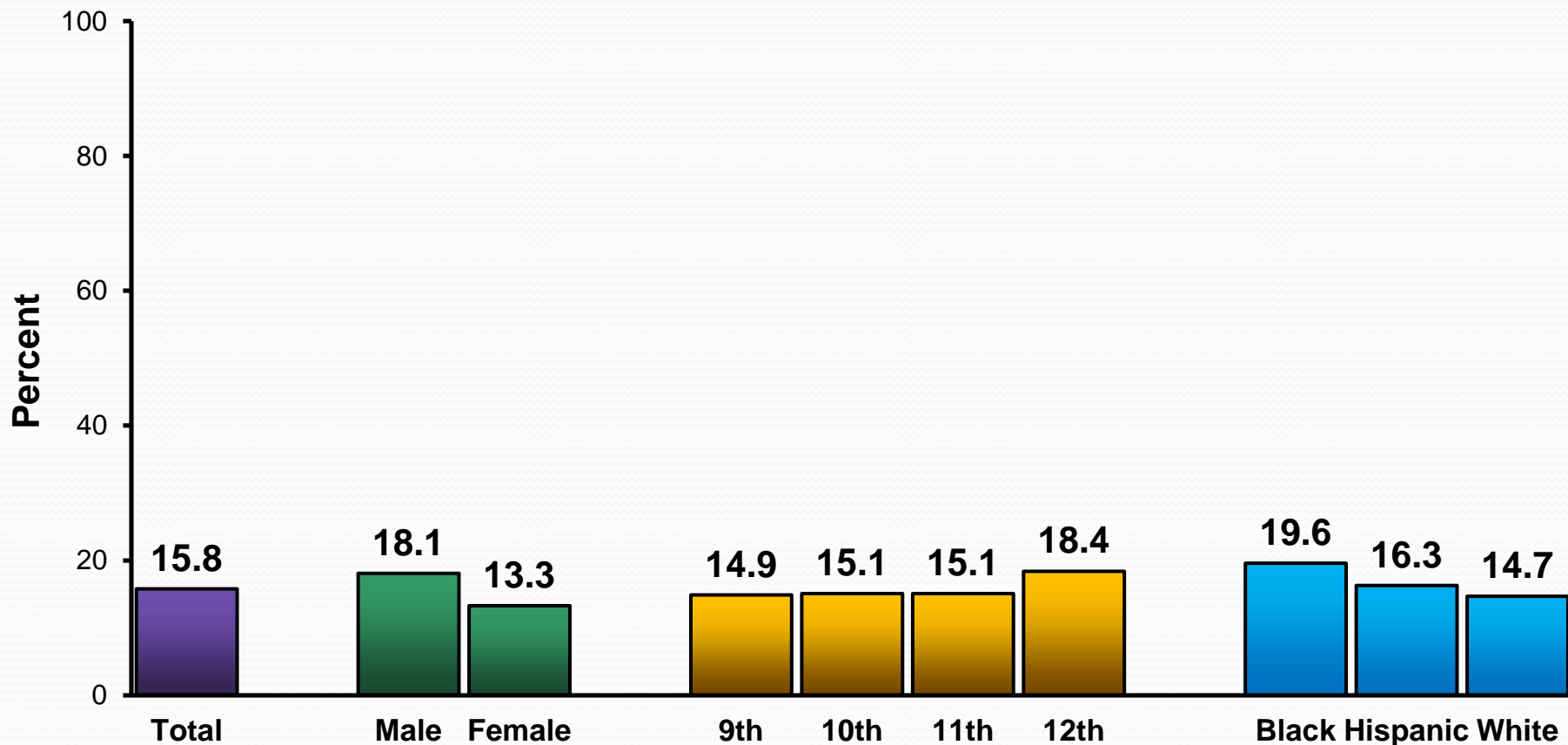
Percentage of DE High School Students Who Were Overweight,* 1999-2015



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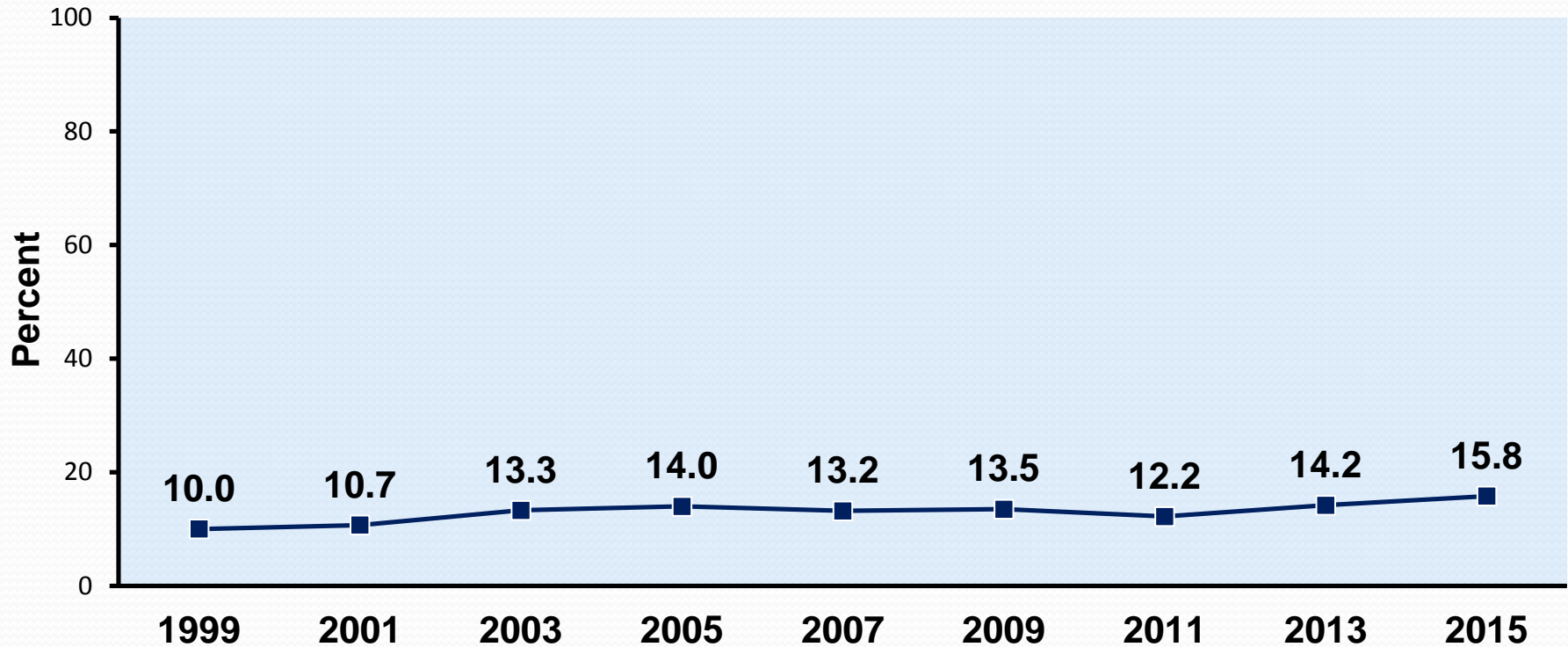
Source: Delaware Health & Social Services, Division of Public Health, Youth Risk Behavior Survey (YRBS), 2015.

Percentage of DE High School Students Who Were Obese,* by Sex, Grade, and Race/Ethnicity, 2015



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Percentage of DE High School Students Who Were Obese,* 1999-2015



* \geq 95th percentile for Body Mass Index, based on sex- and age-specific reference data from the 2000 CDC growth charts.

Source: Delaware Health & Social Services, Division of Public Health, Youth Risk Behavior Survey (YRBS), 2015.

Weight estimates for younger children

Estimates vary; and there are few data sources available for children below high school age. *Most data are not current.*

- Youth Risk Behavior Surveys – 2015
Middle & High School overweight/obese combined = **31.6%**
- National Survey of Children's Health [DE sample] – 2011-12
Ages 10-17 overweight/obese combined = **32%**
- Nemours Children's Health Survey – 2011
Ages 2-17 overweight/obese = **40%**
- Delaware Public Schools FitnessGram® testing – 2012
grades 6-8 overweight/obese combined = ~**44.1%**
grades K-5 overweight/obese combined = ~**42.5%**



ALMOST NONE

Recommended:

5 or more vegetables and fruits a day

2 hours of leisure screen time per day

1 hour of moderate to vigorous physical activity per day,
at least 5 days a week

0 or almost no sugar-sweetened beverages

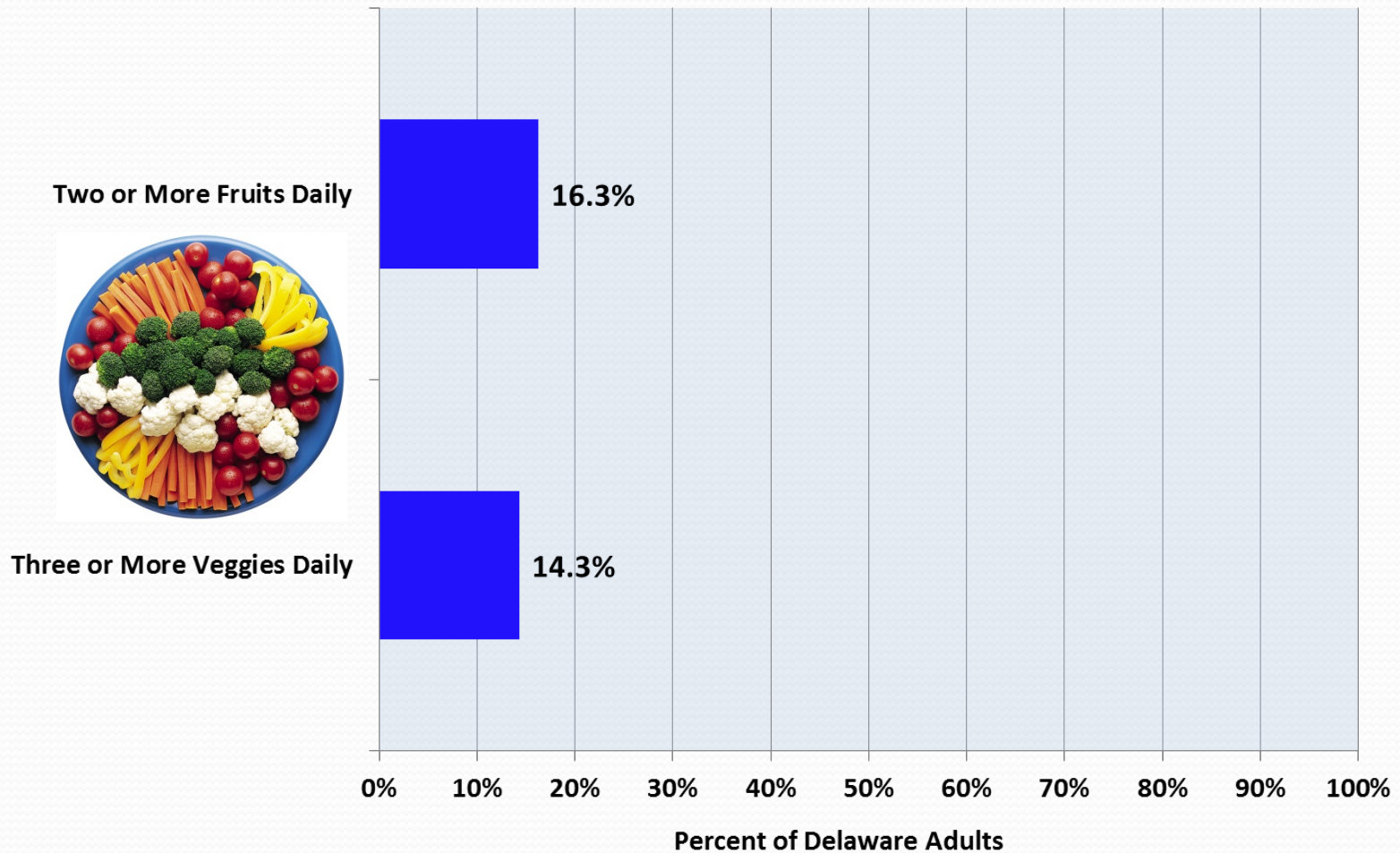




So . . .

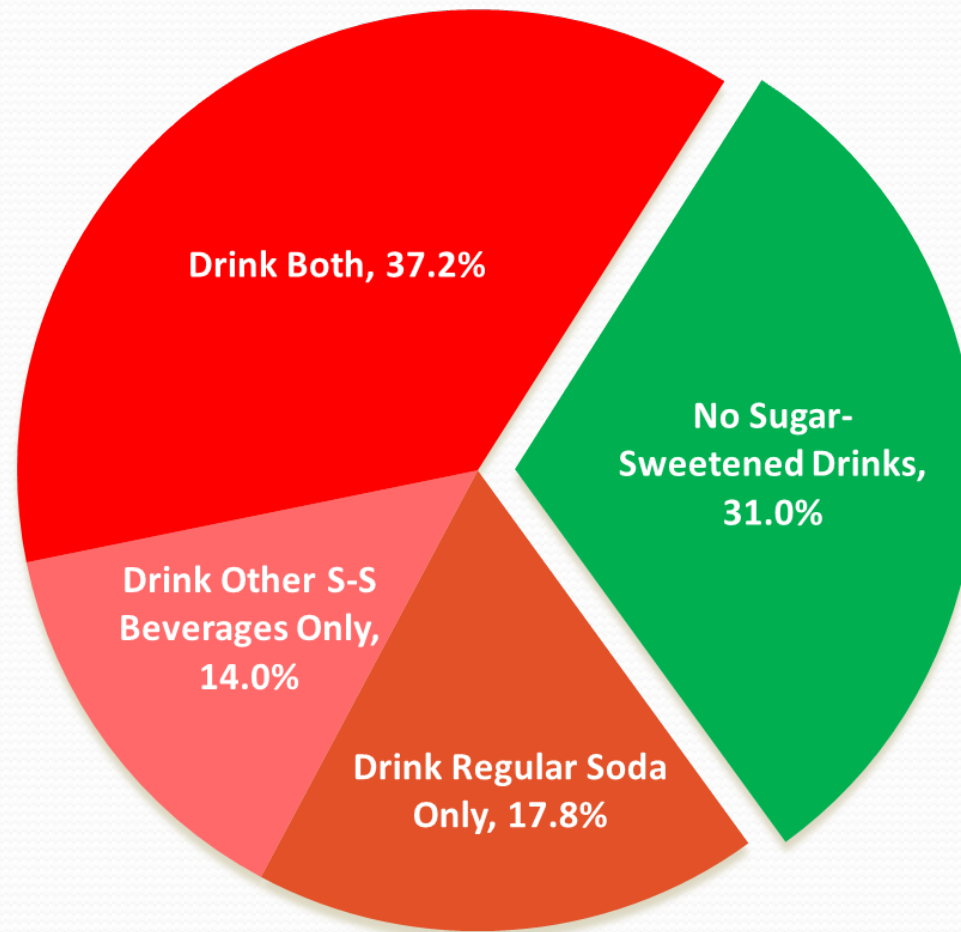
How are we doing
with these healthy
behavior goals?

Delaware Adult Fruit and Vegetable Consumption, 2015



Source: Delaware Health & Social Services, Division of Public Health, Behavioral Risk Factor Survey (BRFS), 2015.

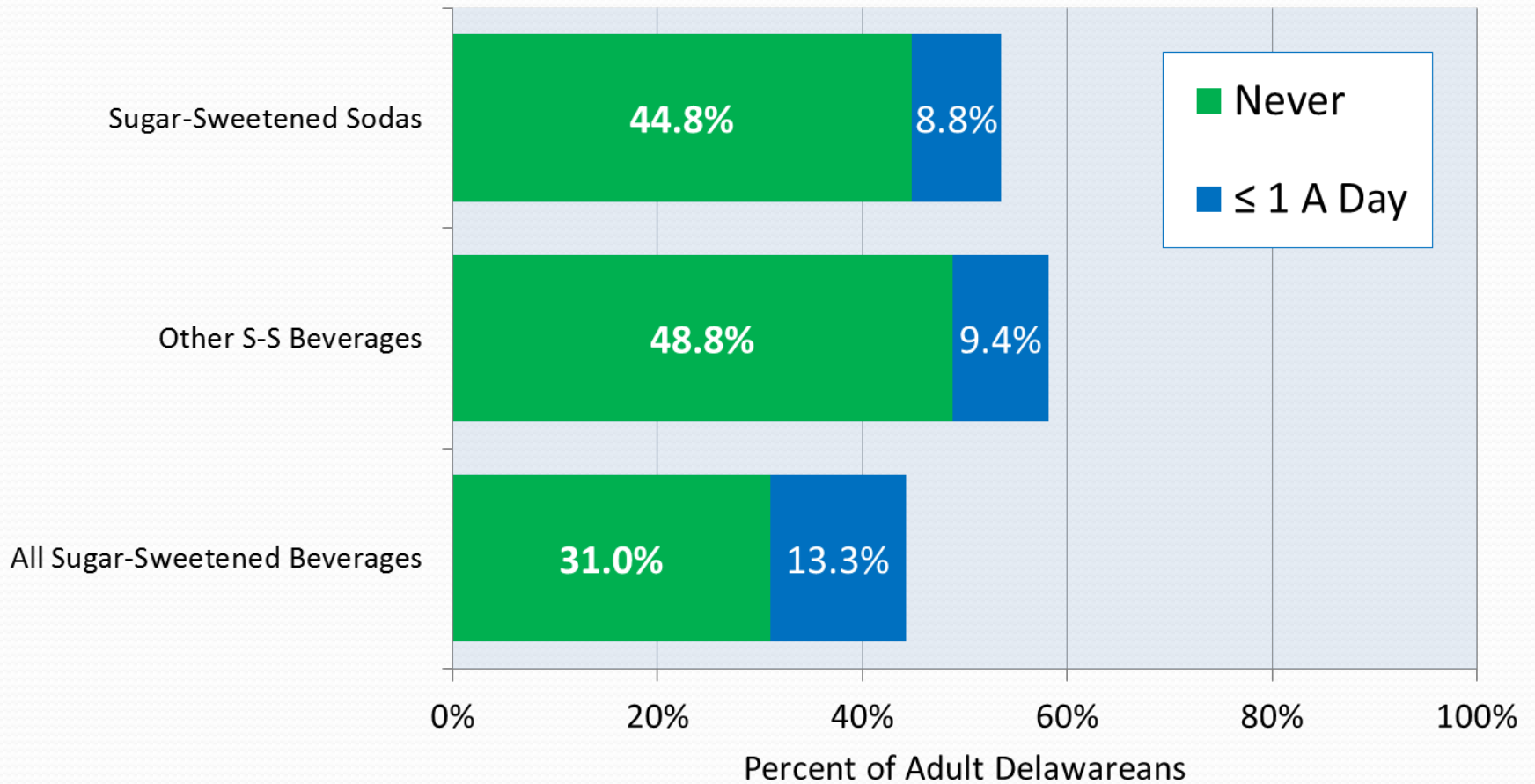
Percent of Delaware Adults Who Drink Sugar-Sweetened Beverages, 2015



Other sugar-sweetened beverages include:

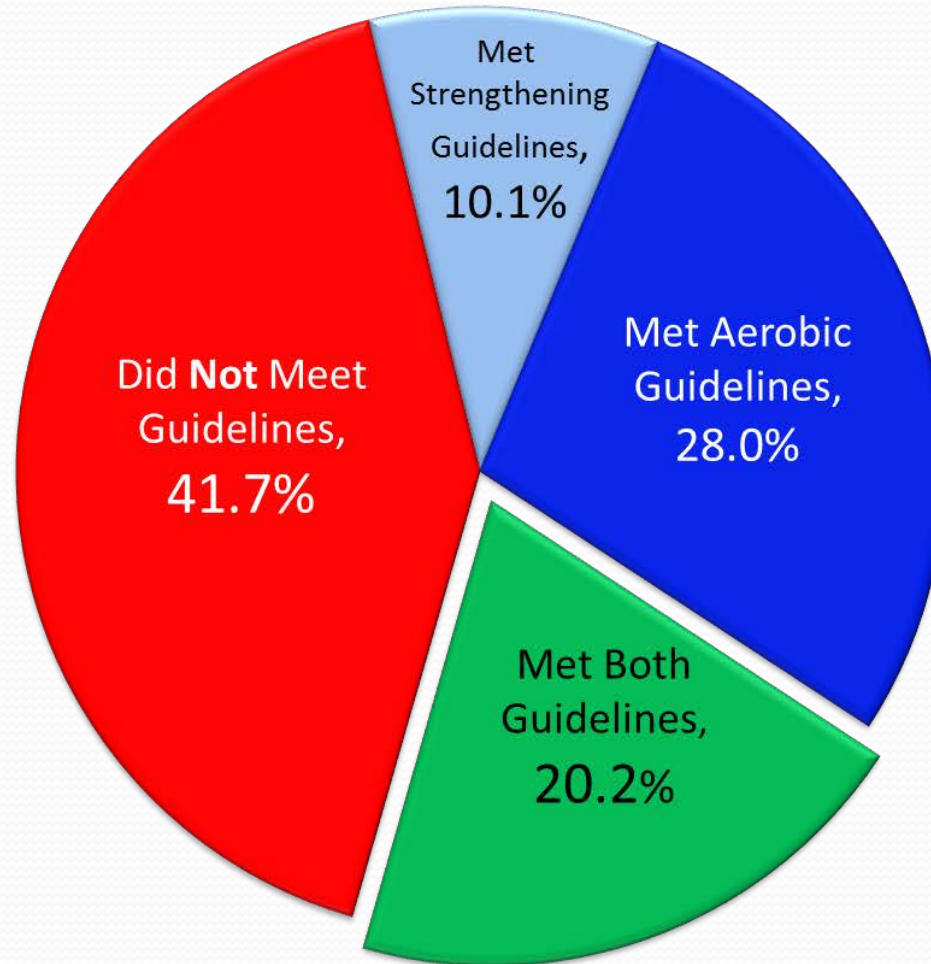
- Fruit drinks
- Lemonade
- Sweet tea
- Energy & sports drinks

Percent of Adult Delaware Residents Who Drink No Sugar-Sweetened Beverages, or ≤ 1 a Day, 2015



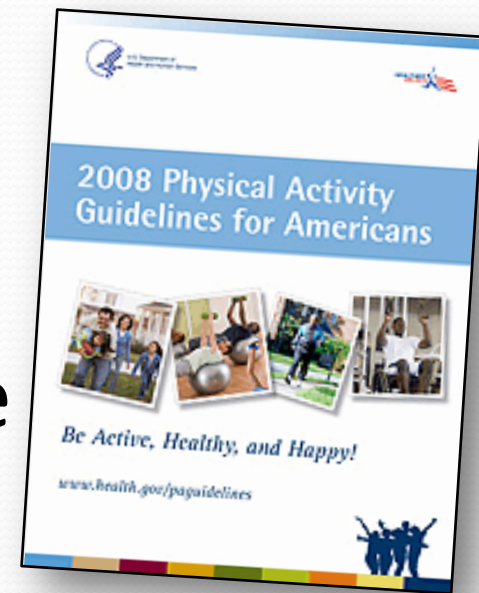
Source: Delaware Health & Social Services, Division of Public Health, Behavioral Risk Factor Survey (BRFS), 2015.

Percent of Delaware Adults Who Meet CDC Guidelines for Physical Activity, 2015

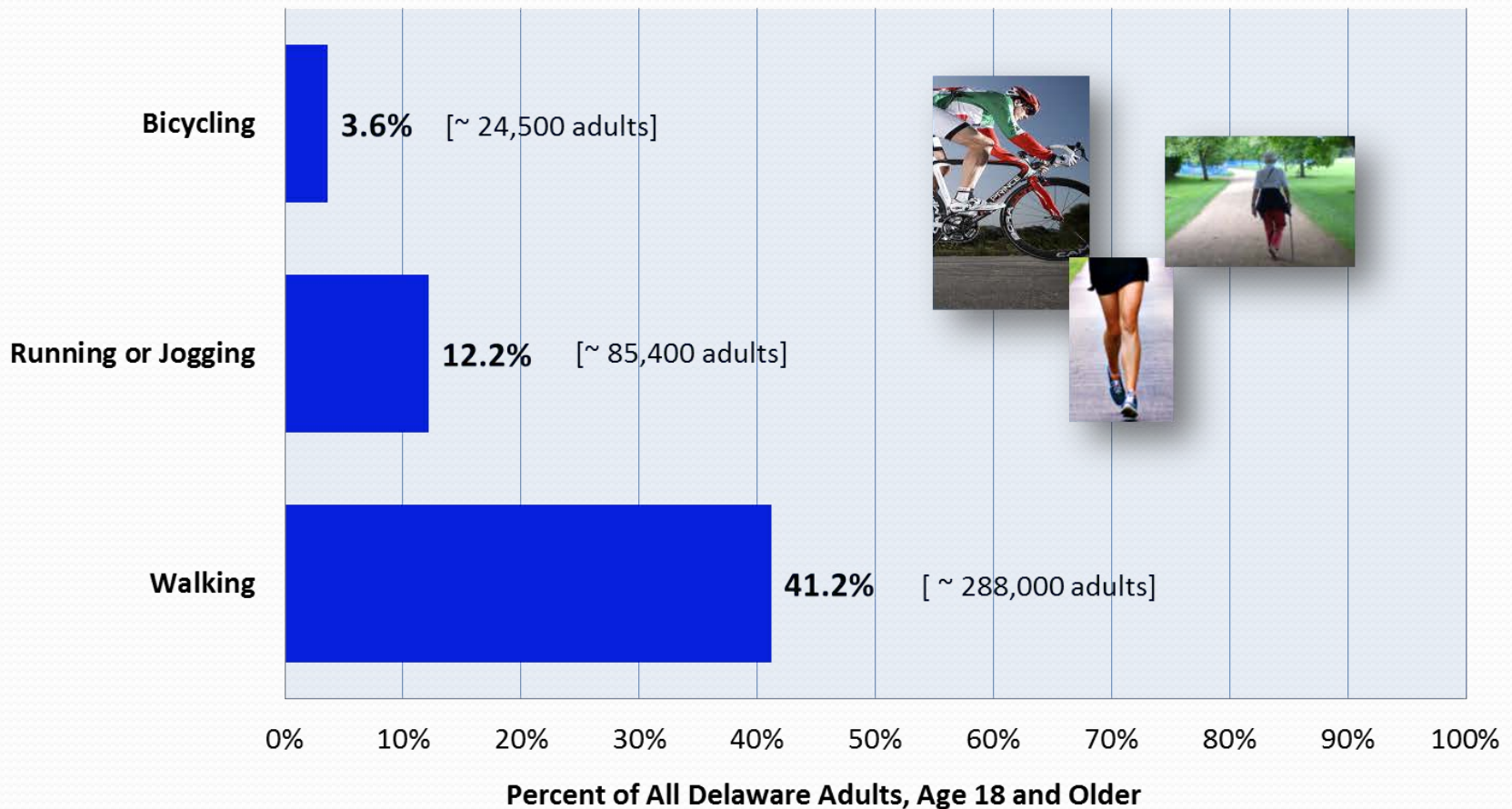


Source: Delaware Health & Social Services, Division of Public Health, Behavioral Risk Factor Survey (BRFS), 2015.

Delaware adults who ***did not meet*** recommendations for physical activity (*i.e.* both strength-building and aerobic) are almost **twice as likely** to have a BMI considered **obese**, compared to those who met the recommendations.

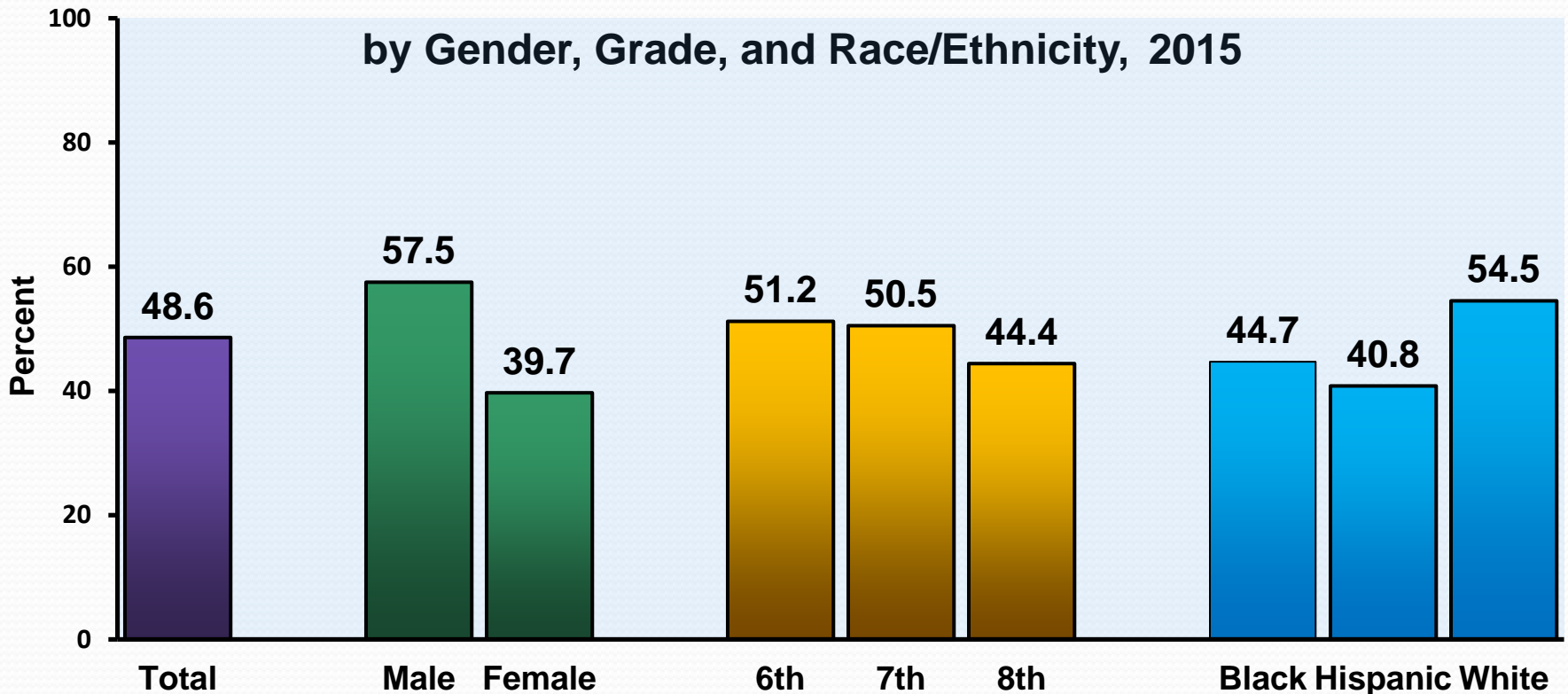


Walking, Running or Bicycling as Primary or Secondary Source of Leisure- Time Physical Activity in Delaware, 2013



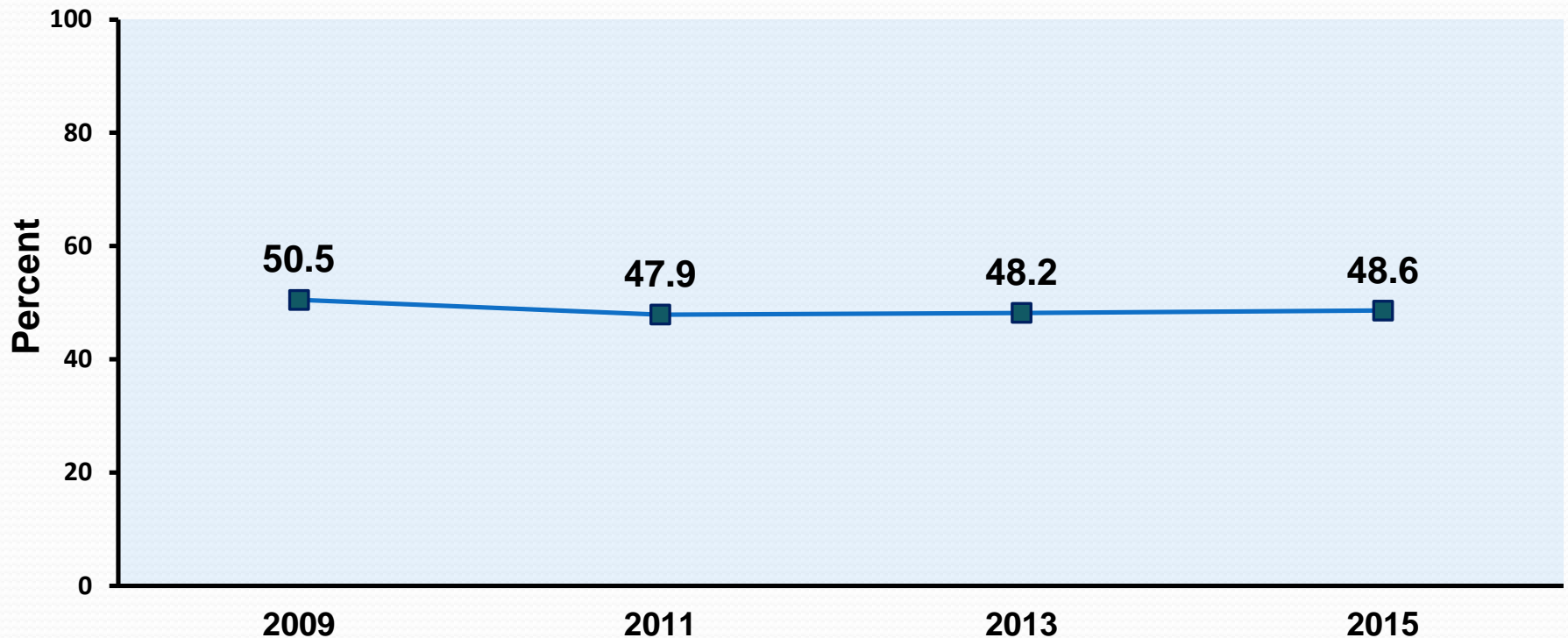
Source: Delaware Health & Social Services, Division of Public Health, Behavioral Risk Factor Survey (BRFS), 2013.

Percentage of Delaware Middle School Students Who Were Physically Active at Least 60 Minutes Per Day on 5 or More Days,*



*Doing any kind of physical activity that increased their heart rate and made them breathe hard some of the time during the 7 days before the survey.

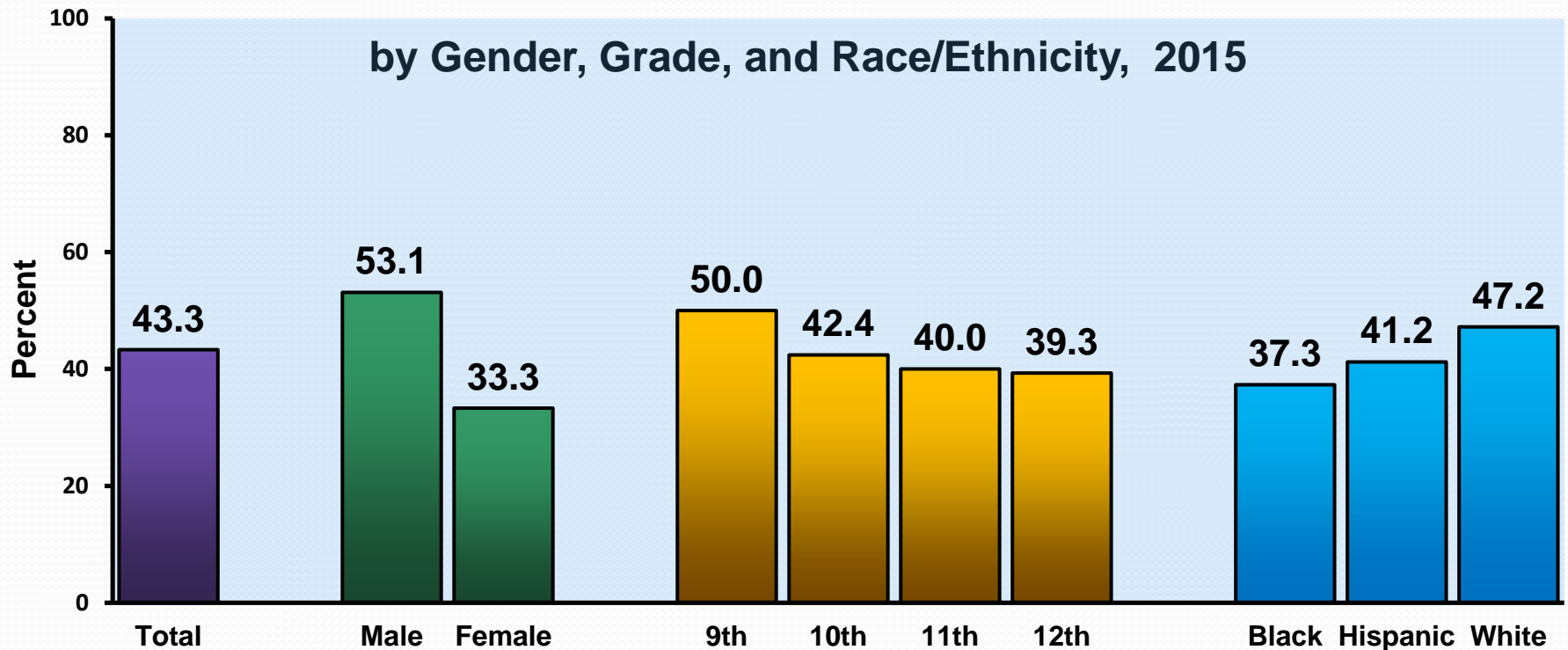
Percentage of Middle School Students Who Were Physically Active at Least 60 Minutes Per Day on 5 or More Days,* 2009-2015



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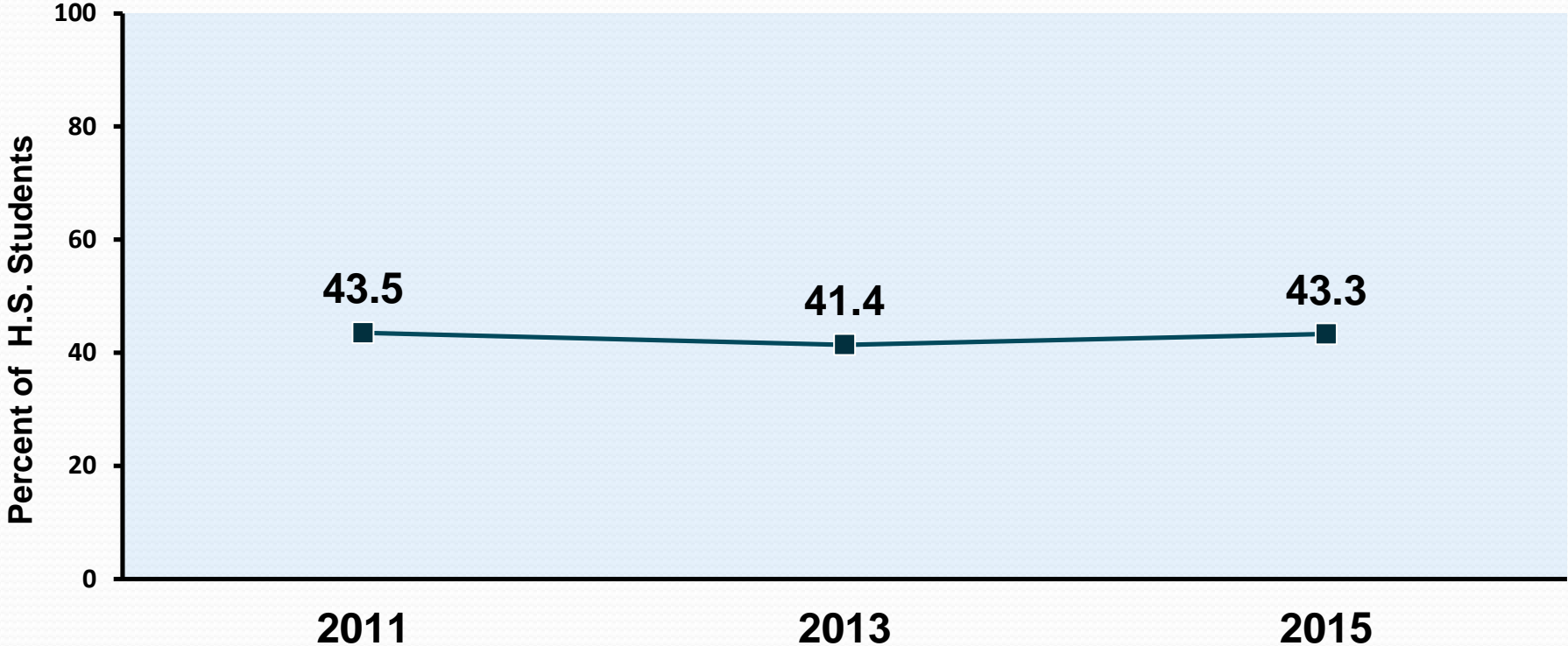
Source: University of Delaware, Center for Drug and Health Studies, M.S. Youth Risk Behavior Survey (YRBS), 2015.

Percent of Delaware H.S. Students Who Were Physically Active at Least 60 Minutes Per Day on 5 or More Days,*



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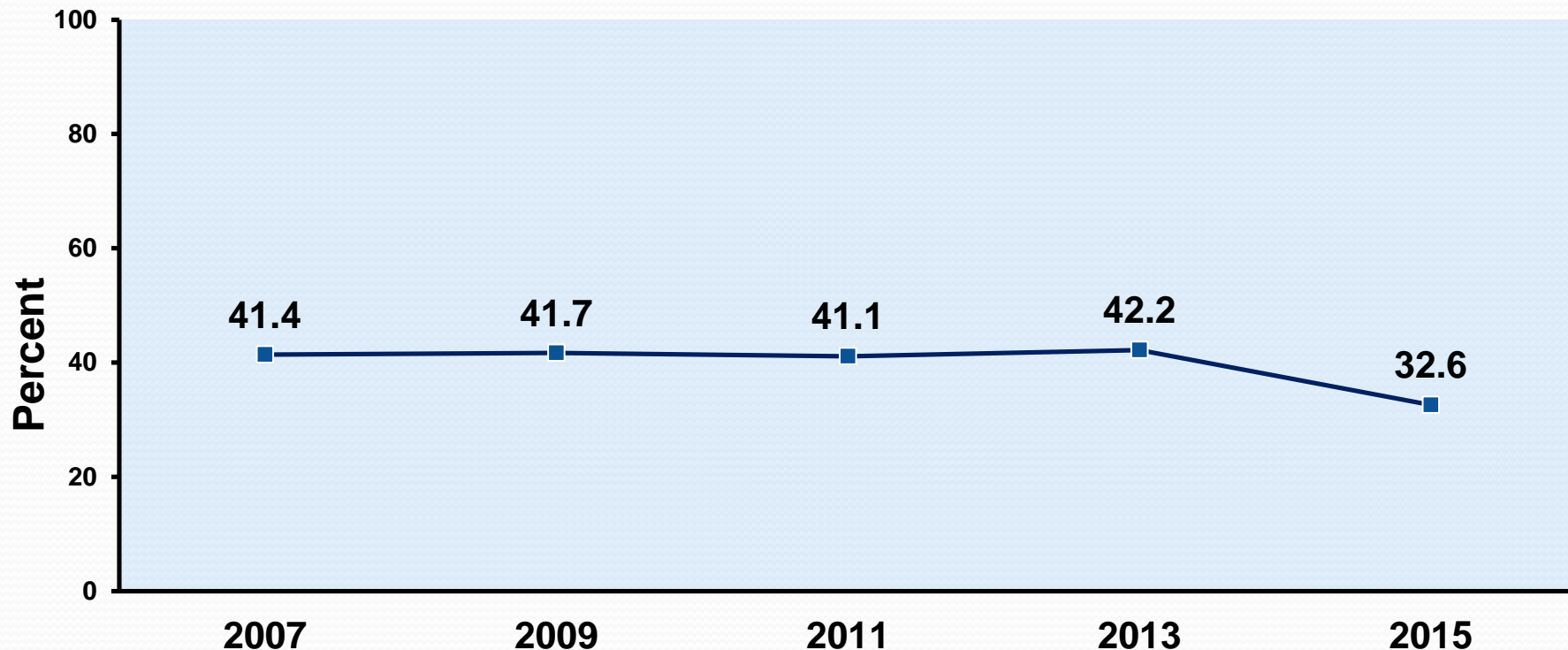
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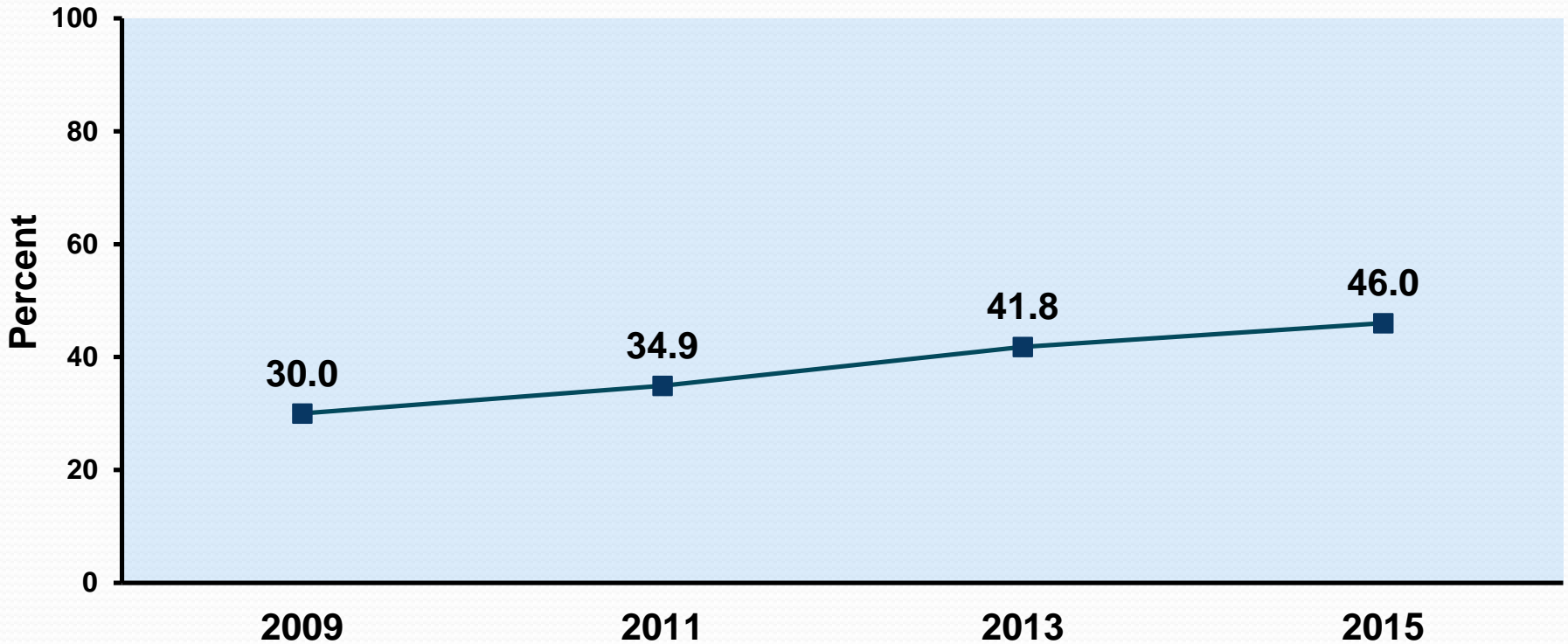
Percentage of Delaware Middle School Students Who Watched Television 3 or More Hours Per Day,* 2007-2015



*On an average school day

Source: University of Delaware, Center for Drug and Health Studies, Middle School Youth Risk Behavior Survey (YRBS), 2015

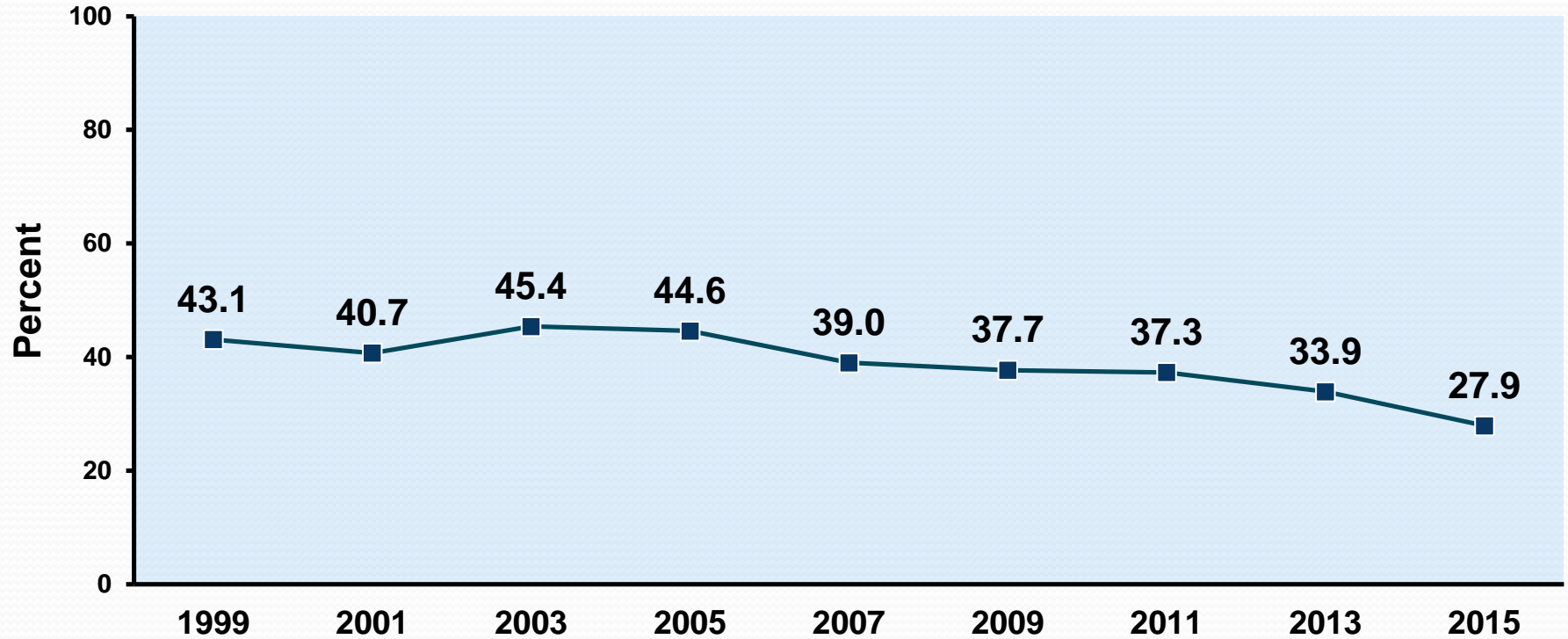
Percentage of Delaware M.S. Students Who Played Video/Computer Games or Used a Computer 3 or More Hours Per Day,* 2009-2015



*For something that was not school work on an average school day

Source: University of Delaware, Center for Drug and Health Studies, Middle School Youth Risk Behavior Survey (YRBS), 2015.

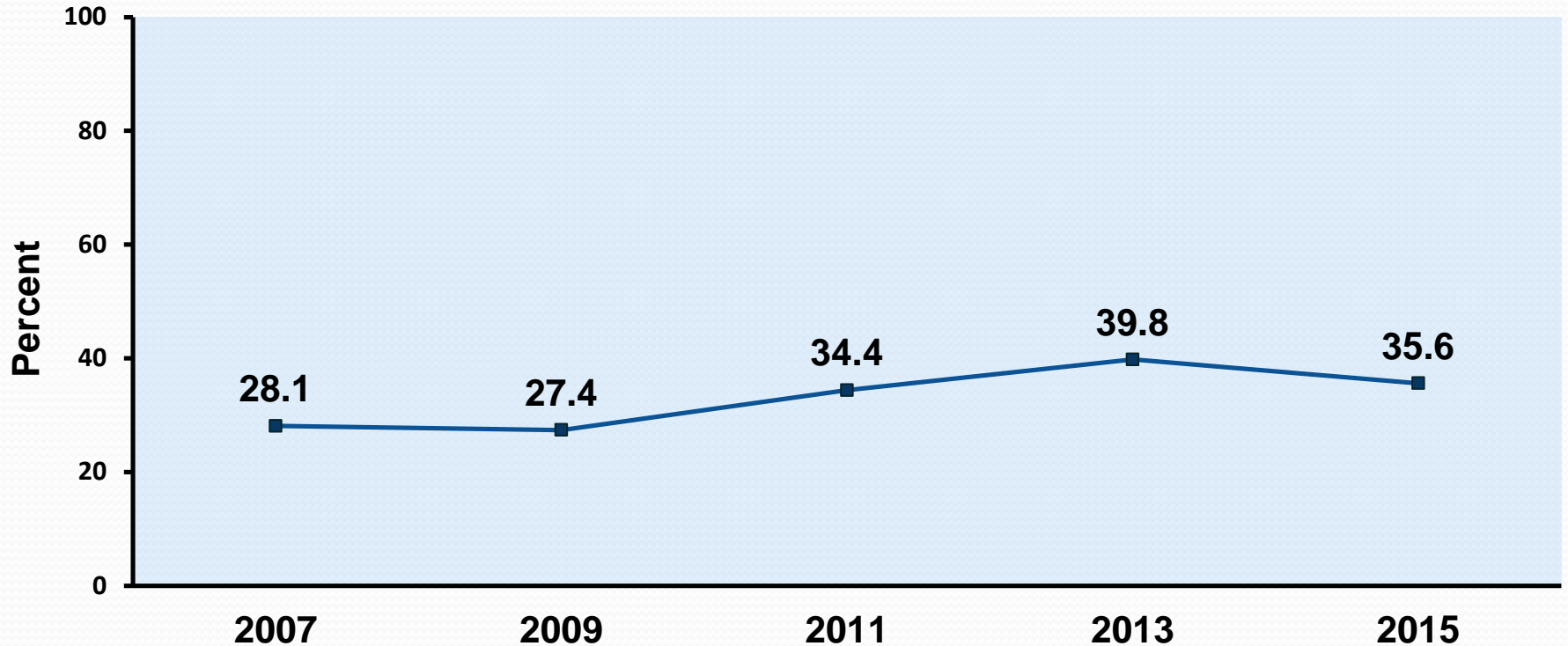
Percentage of DE High School Students Who Watched Television 3 or More Hours Per Day,* 1999-2015†



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Source: Delaware Health & Social Services, Division of Public Health, Youth Risk Behavior Survey (YRBS), 2015.

Percentage of DE High School Students Who Played Video/Computer Games or Used a Computer 3 or More Hours Per Day,* 2007-2015



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Source: Delaware Health & Social Services, Division of Public Health, Youth Risk Behavior Survey (YRBS), 2015

Thanks to:

- **Stephanie Belinske**, MPH, chronic disease epidemiologist, Division of Public Health, for analysis of BRFSS data
- **Steven Martin** and **Roberta Gealt**, Center for Drug and Health Studies, University of Delaware
- **Andrew Evans**, MBA, senior project director, Abt SRBI, Inc.
- **Division of Population Health**, Center for Chronic Disease Prevention and Health Promotion, U.S. Centers for Disease Control and Prevention (CDC)



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