

The Youth Risk Behavior Surveillance System (YRBSS)

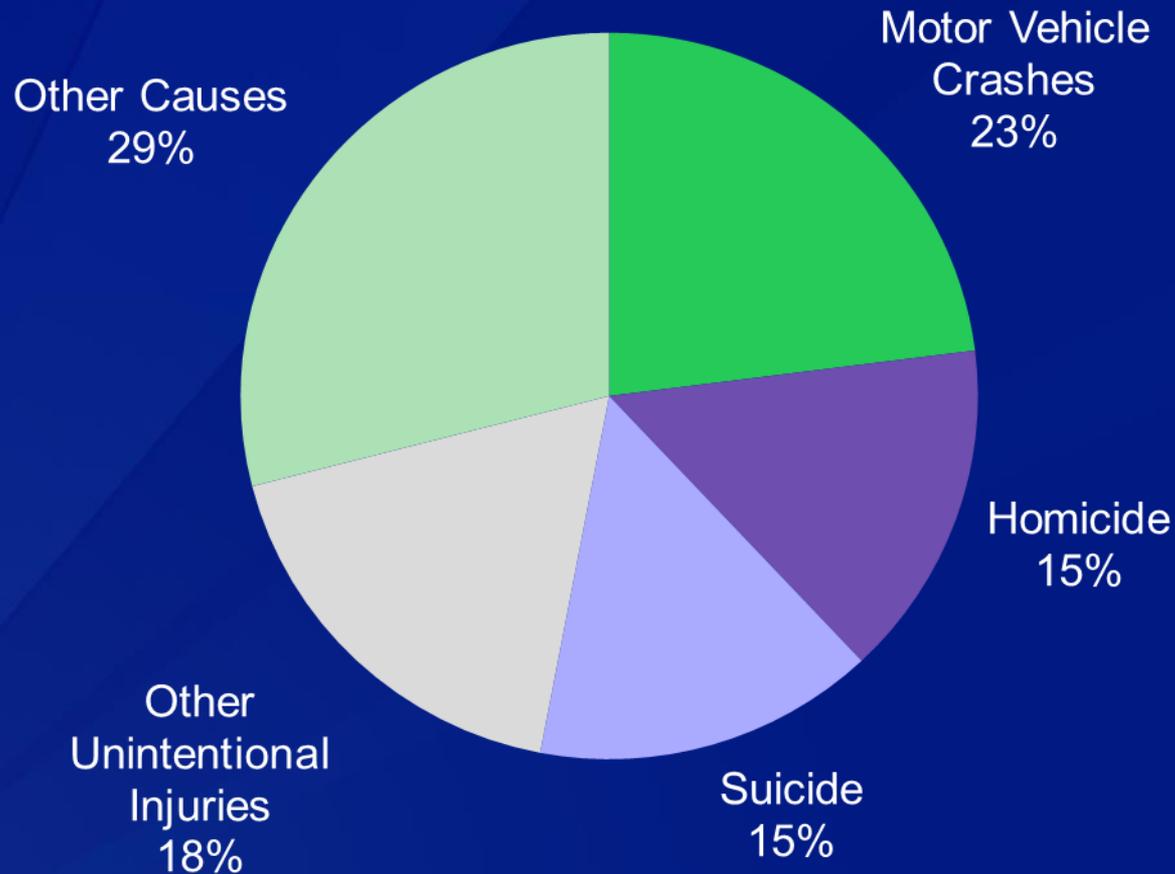
Laura Kann, Ph.D.

Chief, School-Based Surveillance Branch
Division of Adolescent and School Health

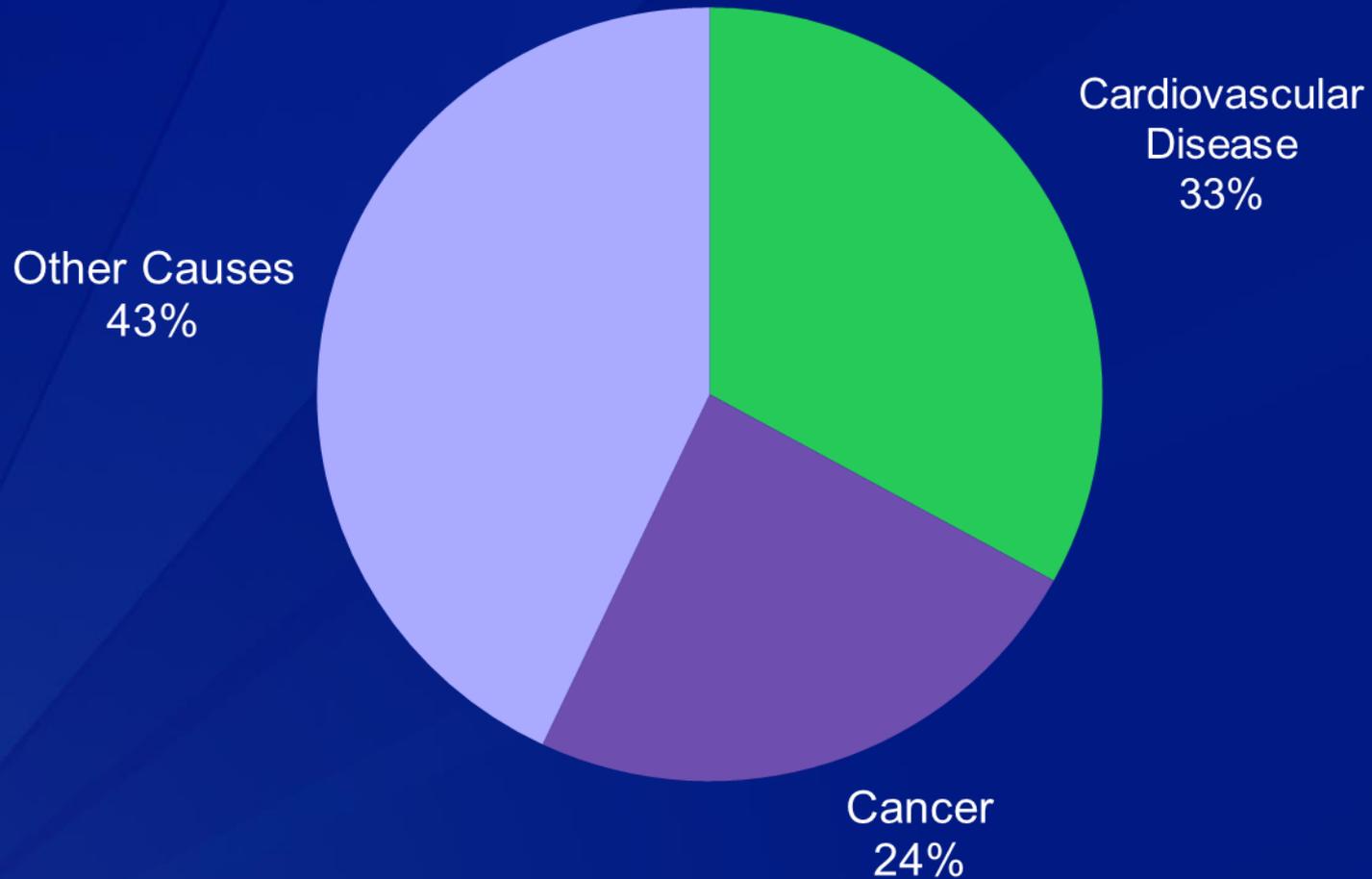
Purposes of the YRBSS

- Focus the nation on behaviors among youth causing the most important health problems
- Assess how risk behaviors change over time
- Provide comparable data

Leading Causes of Death Among Persons Aged 10 – 24 Years in the United States, 2010



Leading Causes of Death Among Persons Aged 25 Years and Older in the United States, 2010



Impact of Sexual Behaviors

In 2011,

- 329,772 births occurred among women aged 15 – 19 years
- 548,032 cases of chlamydia, gonorrhea, and syphilis were reported among persons aged 15 – 19 years
- An estimated 2,240 cases of HIV were diagnosed among persons aged 15 – 19 years

Priority Health-Risk Behaviors and Health Outcomes Monitored by YRBSS

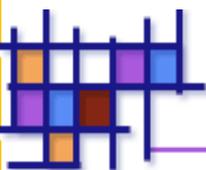
- Behaviors that contribute to the leading causes of mortality and morbidity
 - Unintentional injuries and violence
 - Sexual behaviors
 - Alcohol and other drug use
 - Tobacco use
 - Unhealthy dietary behaviors
 - Inadequate physical activity
- Obesity
- Asthma

Unintentional Injury Questions

- Bicycle helmet use
- Seat belt use while riding
- Riding in a vehicle driven by someone who had been drinking
- Drinking and driving
- Texting or emailing while driving

Violence-Related Questions

- Weapon carrying
- Gun carrying
- Weapon carrying on school property
- Not going to school because of safety concerns
- Threatened or injured with a weapon on school property
- Physical fighting, injurious physical fighting, and physical fighting on school property
- Forced sexual intercourse
- Physical dating violence
- Sexual dating violence
- Bullied on school property
- Electronic bullying



YRBSS

Youth Risk Behavior Surveillance System

Suicide-Related Questions

- Feeling sad or hopeless
- Seriously considered suicide
- Made a suicide plan
- Attempted suicide
- Injurious suicide attempt

Optional Question List

- 21 new injury-related questions for 2015
- 33 total questions
 - Motor vehicle safety – 3
 - Violence – 4
 - Bullying and harassment – 9
 - Gang activity – 6
 - Sexual and partner violence – 8
 - Self harm - 3

YRBSS Components

Currently

- National school-based YRBS
- State, territorial, tribal, and local school-based YRBS

Previously

- Psychometric and methods studies
- Special focus surveys
- National household-based YRBS
- National college YRBS
- National alternative high school YRBS

Characteristics of the National, State, and Local School-Based YRBS's

- 9th – 12th grade students
- Probability samples of schools and students
- Anonymous
- Self-administered, computer-scannable questionnaire or answer sheet
- Completed in one class period (45 minutes)
- Conducted biennially usually during the spring

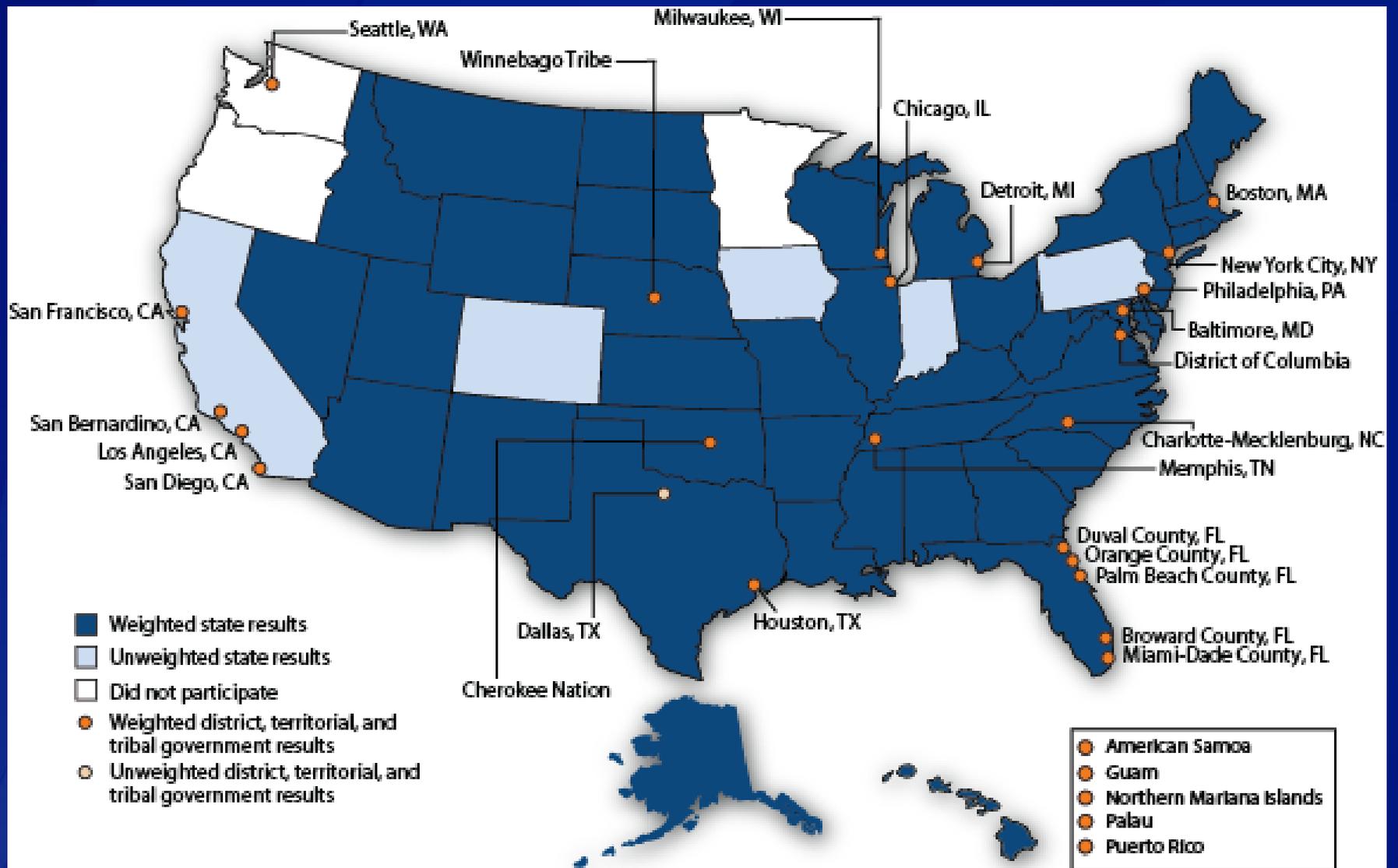
Response Rates and Sample Sizes National YRBS, 1991 – 2013

Year	School Response Rate	Student Response Rate	Overall Response Rate	Sample Size
1991	75%	90%	68%	12,272
1993	78%	90%	70%	16,296
1995	70%	86%	60%	10,904
1997	79%	87%	69%	16,262
1999	77%	86%	66%	15,349
2001	75%	83%	63%	13,601
2003	81%	83%	67%	15,214
2005	78%	86%	67%	13,917
2007	81%	84%	68%	14,041
2009	81%	88%	71%	16,410
2011	81%	87%	71%	15,425
2013	77%	88%	68%	13,583

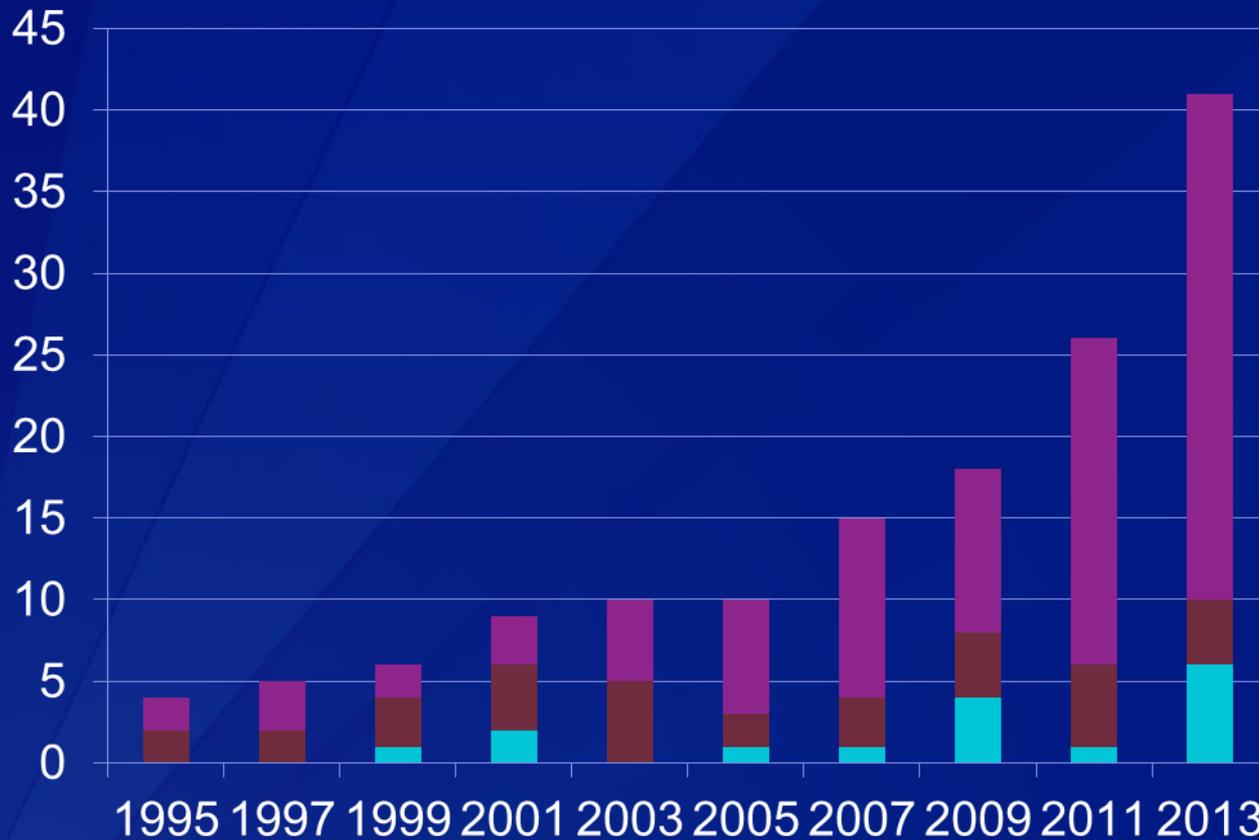
YRBS Participation 1991 – 2013

	1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013
# of states	26	40	39	38	41	37	43	44	44	47	47	47
# of cities	11	14	17	17	17	19	22	23	22	23	22	22
# of territories	2	2	5	5	4	7	5	4	5	4	4	5
# of tribal governments	--	--	--	--	--	--	--	--	--	2	2	2
total # of sites	38	56	61	60	62	63	70	71	71	76	75	76
% with weighted data	45%	59%	61%	72%	61%	60%	80%	90%	93%	87%	93%	92%

YRBS Participation, 2013



Number of Sites* Asking About Sexual Minority Status, by Year



- Both
- Sexual contact only
- Sexual identity only

*With weighted data

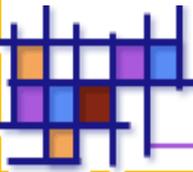
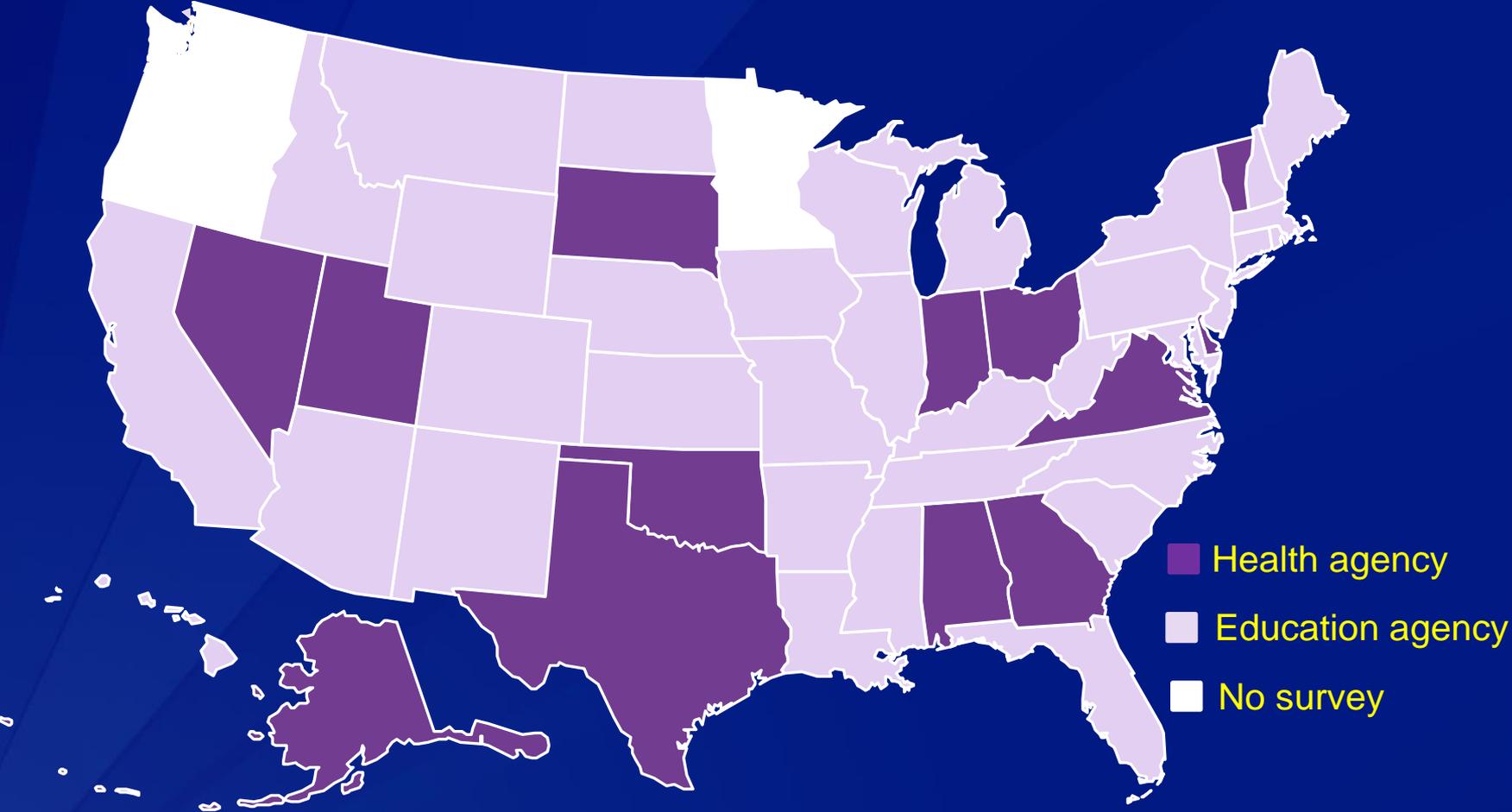
FOA 1308 Strategy 1 YRBS Funding

- States ~ \$50,000/year, ~\$100,000/survey
- Districts ~\$35,000/year, ~\$70,000/survey
- Territories ~\$7,000/year, ~\$14,000/survey

Plus

- Sexual minority question incentive - \$5,000/year

Funded agencies



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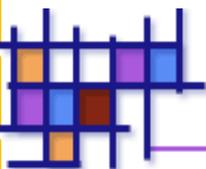
Youth Risk Behavior Surveillance System

Technical Assistance Services

- Survey planning
- Questionnaire modification and answer sheets
- Sample selection
- Clearance strategies
- Survey administration guidance
- Answer sheet scanning
- Cleaning, editing, and weighting data and report generation

Sources of YRBS Technical Assistance

- YRBS Handbook
- YRBS training
- YRBS website – www.cdc.gov/yrbs
- Monthly newsletters
- YRBS listserve
- Survey TA website - <https://apps.nccd.cdc.gov/surveyta/index.asp>
- Special videos and other products
- Email, phone, and in-person consultation

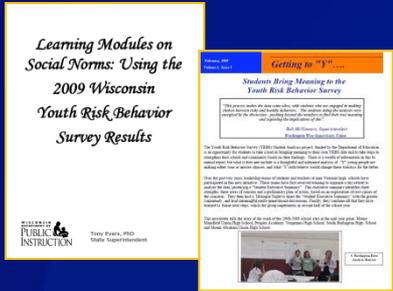


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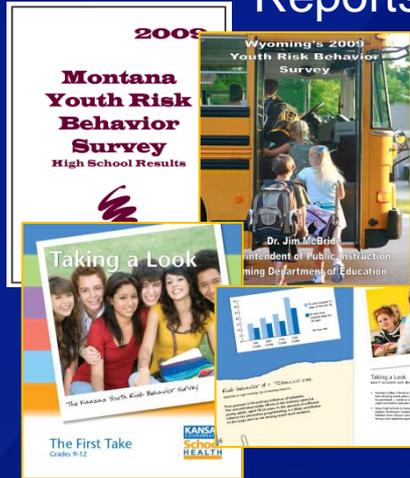
Youth Risk Behavior Surveillance System

Dissemination of YRBS Data

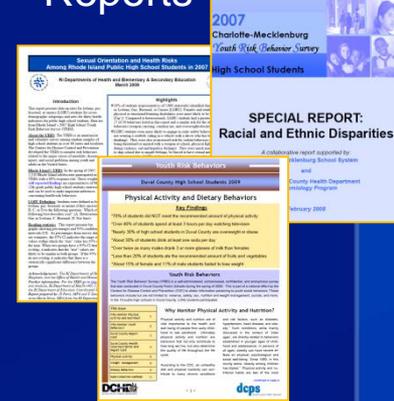
Training Materials



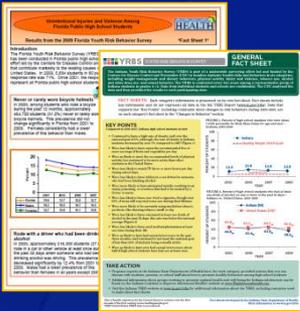
Summary Reports



Special Reports



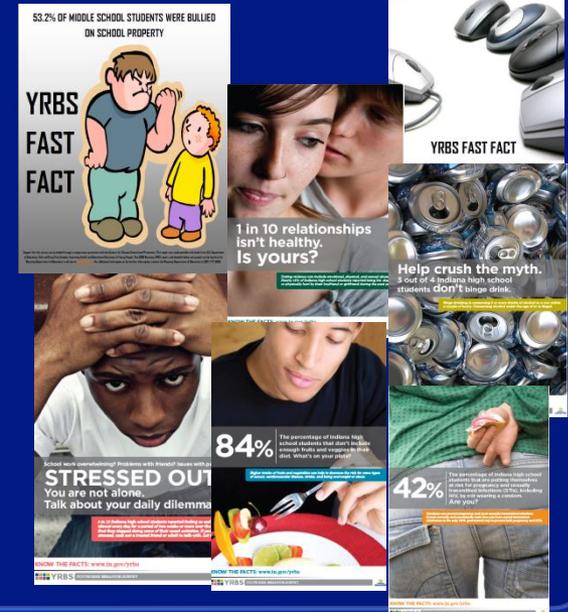
Fact Sheets



Combination Reports



Posters



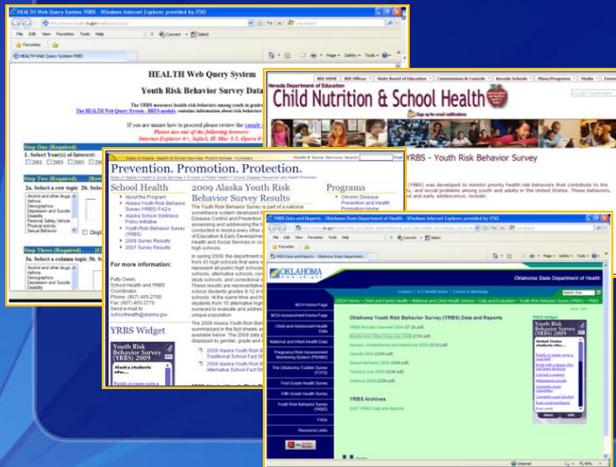
Newsletters



Data Release Events



Websites



Brochures

YRBSS Scientific Publications

Centers for Disease Control and Prevention
MMWR

Morbidity and Mortality Weekly Report
Surveillance Summaries / Vol. 63 / No. 4
June 13, 2014

Youth Risk Behavior Surveillance —
United States, 2013



U.S. Department of Health and Human Services
Centers for Disease Control and Prevention

American Journal of
**PUBLIC
HEALTH**



ARCHIVES OF
**PEDIATRICS
& ADOLESCENT MEDICINE**

JAMA[®]
The Journal of the American Medical Association

MMWR[™]
Morbidity and Mortality Weekly Report



PEDIATRICS[®]



YRBSS Release Scientific Products



- *MMWR* Surveillance Summary
 - 2013 data from 42 states and 21 cities by sex
 - 2013 National YRBS data by sex, race/ethnicity, and grade
 - 117 tables describing 104 variables and 68,952 prevalence estimates
 - National YRBS trends from 1991- 2013
 - 2013 update on 20 Healthy People 2020 Objectives

The YRBS *MMWR* Surveillance Summary consistently ranks as the **most popular** *MMWR* Surveillance Summary!

(more than 18,000 downloads since June)

YRBSS Release Scientific Products

- Updated Youth Online
- Updated slide set
- Updated YRBS data widget
- 3 series (sexual risk behaviors, obesity, and tobacco use) of 53 fact sheets combining YRBS and Profiles data
- 63 fact sheets comparing state/local data with national data
- 10 topic-specific trend fact sheets
- Updated technical resources

YRBSS Release Social Media

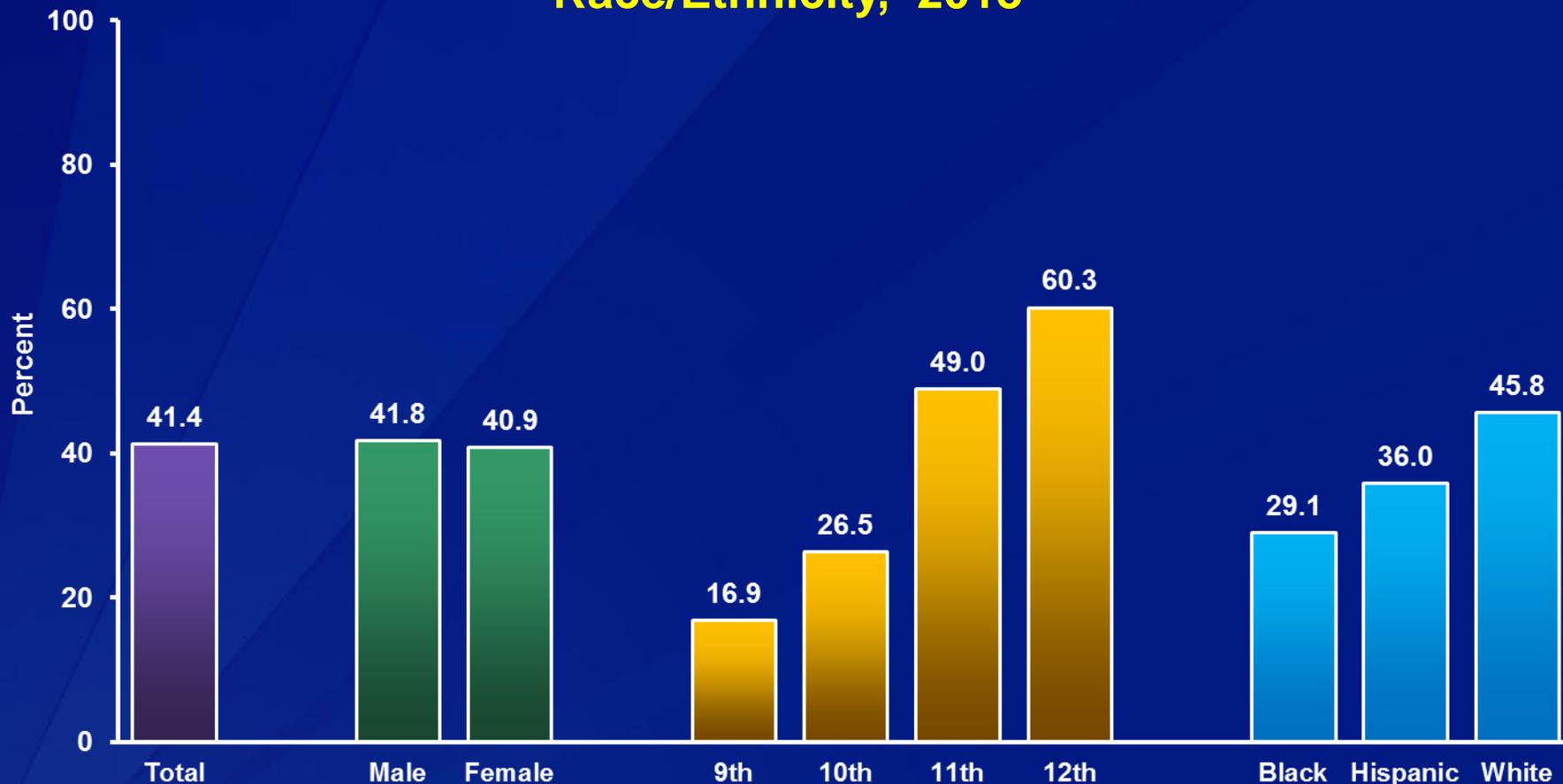
- **Facebook:** CDC and NPIN Facebook
- **CDC Instagram:** two graphical posts
- **Blogs:** AIDS.gov blog
- **Pinterest:** release of DASH infographic newly updated with YRBS data
- **Podcasts:** 1 for *MMWR* and 1 for HHS's *HealthBeat*
- **LinkedIn - NPIN**
- **Twitter:**
 - CDC Agency Accounts: @CDCgov, @CDCehealth, and @DrFriedenCDC
 - NCHHSTP Accounts: @DrZazaCDC, @DrMerminCDC, @DrDeanCDC, @DrKhabbazCDC, @CDCNPIN, and @CDC_HIVAIDS
 - @CDCChronic
 - @CDCTobaccofree
 - **@CDCInjury**

YRBSS Release News Media

- CDC Press Release – **featured data on physical fighting and texting/emailing while driving**
- CDC Media telebriefing featuring Dr. Frieden with support from NCCDPHP and **NCIPC**

Media Type	Count	Reach	Publicity Value
AM Radio Station	26	132,089,527	\$1,929,763
Broadcast Station Website	411	76,605,912	\$37,574
Cable/Satellite – network/station	31	1,157,706	\$5,371
FM Radio Station	14	74,004,230	\$1,301,856
General Interests ^[4]	848	266,590,298	\$156,246
News Websites	436	394,958,873	\$326,194
Newspaper/Daily	10	788,456	\$31,538
Online Print Version	44	13,516,733	\$4,520
Television program	237	22,095,533	\$1,844,182
Television station	289	47,261,839	\$4,359,488
Web Newswire	18	10,318,924	\$8,256
Other	21	18,048,809	\$27,245
Grand Total	2,385	1,057,436,840	\$10,032,232

Percentage of High School Students Who Texted or E-mailed While Driving a Car or Other Vehicle,* by Sex, Grade,† and Race/Ethnicity,† 2013



*On at least 1 day during the 30 days before the survey, among the 64.7% of students nationwide who had driven a car or other vehicle during the 30 days before the survey.

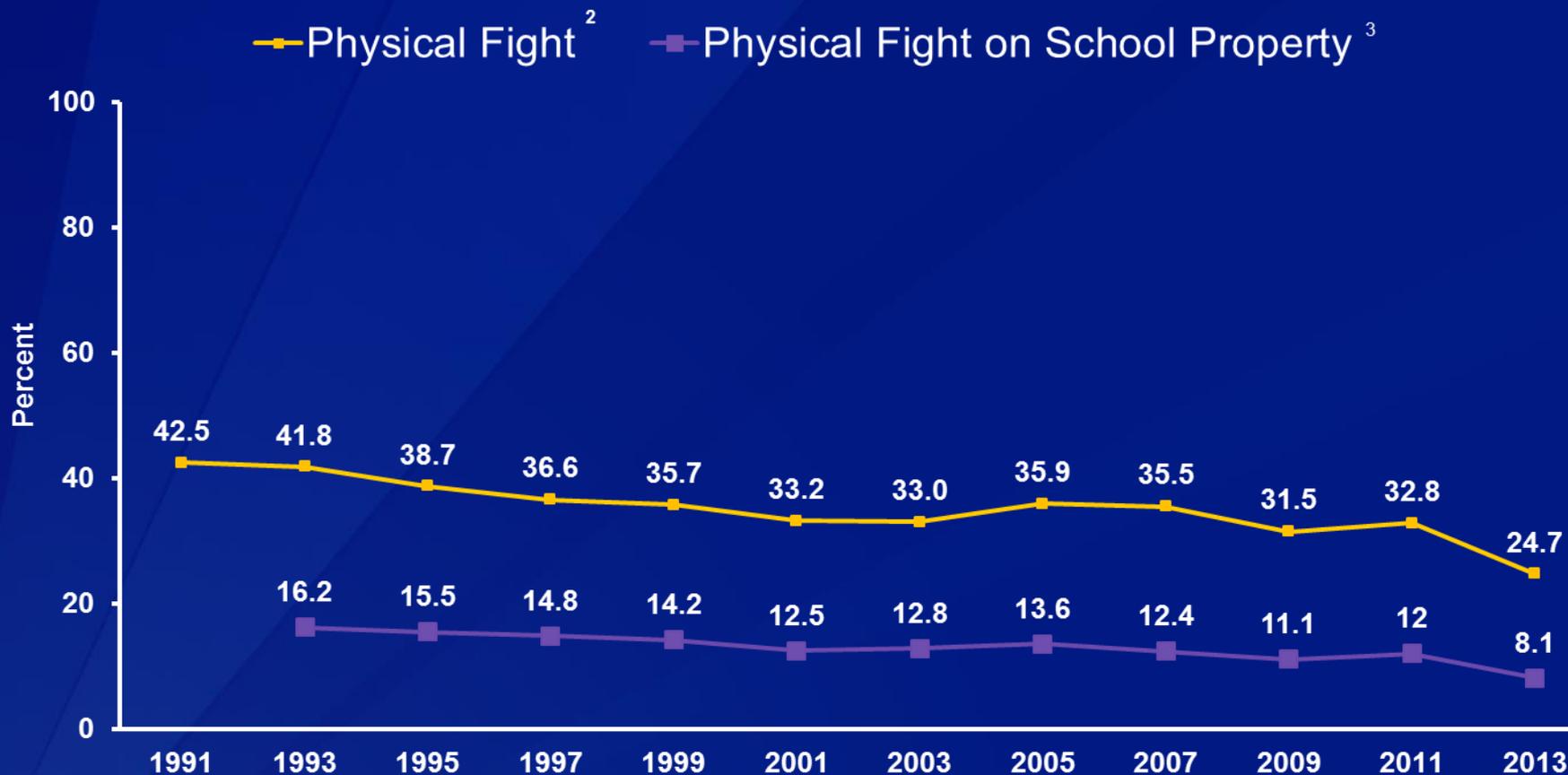
†10 > 9, 11 > 9, 11 > 10, 12 > 9, 12 > 10, 12 > 11; H > B, W > B, W >

Range and Median Percentage of High School Students Who Texted or E-mailed While Driving a Car or Other Vehicle,* Across 37 States and 15 Cities, 2013



*On at least 1 day during the 30 days before the survey, among the students who had driven a car or other vehicle during the 30 days before the survey.

Percentage of High School Students Who Were in a Physical Fight¹ and in a Physical Fight on School Property¹ 1991-2013



¹One or more times during the 12 months before the survey.

²Decreased 1991-2013

³Decreased 1993-2013

Injury-Related Trend Fact Sheets

Trends in the Prevalence of Suicide-Related Behavior
National YRBS: 1991–2013

The national Youth Risk Behavior Survey (YRBS) monitors priority health risk behaviors that contribute to the leading causes of death, disability, and social problems among youth and adults in the United States. The national YRBS is conducted every two years during the spring semester and provides data representative of 9th through 12th grade students in public and private schools throughout the United States.

Percentages	Long term Change ¹	Change from 2011-2013 ²
Thought of or attempted suicide (during the 12 months before the survey)		
25.0 24.1 24.1 20.5 19.3 19.0 16.9 16.9 14.5 13.8 13.8 17.0	Decreased 1991–2013 Decreased 1991–2009 Increased 2009–2013	No change
Made a plan about how they would attempt suicide (during the 12 months before the survey)		
18.6 19.0 17.7 13.7 14.3 14.8 16.3 13.0 11.3 10.9 12.8 13.8	Decreased 1991–2013 Decreased 1991–2009 Increased 2009–2013	No change
Attempted suicide (once or more times during the 12 months before the survey)		
7.3 8.6 6.7 7.7 8.3 8.8 8.5 6.4 6.9 6.3 7.8 8.0	Decreased 1991–2013	No change
Attempted suicide that resulted in an injury, poisoning, or overdose that had to be treated by a doctor or nurse (during the 12 months before the survey)		
1.7 2.7 2.8 2.6 2.8 2.6 2.9 2.3 2.0 1.9 2.4 2.7	No change 1991–2013	No change

¹ Based on linear and quadratic trend analyses using logistic regression models controlling for sex, race/ethnicity, and grade, $p < 0.05$. Significant linear trends (if present) across all available years are described first followed by linear changes in each segment of significant quadratic trends (if present).
² Based on t-test analysis, $p < 0.05$.

Where can I get more information? Visit www.cdc.gov/yrbss or call 800-CDC-INFO (800-232-4636).

National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention
Division of Adolescent and School Health

Trends in the Prevalence of Behaviors that Contribute to Violence
National YRBS: 1991–2013

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Percentages	Long term Change ¹	Change from 2011-2013 ²
Carried a weapon (such as a gun, knife, or club on at least 1 day during the 30 days before the survey)		
26.1 22.1 20.0 18.3 17.3 17.4 17.1 18.5 18.0 17.5 16.6 17.9	Decreased 1991–2013 Decreased 1991–1997 No change 1997–2013	No change
Carried a gun (on at least 1 day during the 30 days before the survey)		
— 7.9 7.6 5.9 4.9 5.7 6.1 5.4 5.2 5.9 5.1 5.3	Decreased 1991–2013 Decreased 1991–1997 No change 1997–2013	No change
Carried a weapon on school property (such as a gun, knife, or club on at least 1 day during the 30 days before the survey)		
— 11.8 9.8 8.5 6.8 6.4 6.1 6.5 5.9 5.8 5.4 5.2	Decreased 1991–2013 Decreased 1991–1999 Decreased 1999–2013	No change
Were threatened or injured with a weapon on school property (such as a gun, knife, or club one or more times during the 12 months before the survey)		
— 7.5 8.4 7.4 7.7 8.9 9.2 7.9 7.8 7.7 7.4 6.9	Decreased 1991–2013 No change 1991–2005 Decreased 2005–2013	No change
Were in a physical fight (one or more times during the 12 months before the survey)		
42.3 41.8 38.7 36.8 35.7 33.2 33.0 35.9 35.3 31.3 32.8 24.7	Decreased 1991–2013	Decreased

¹ Based on linear and quadratic trend analyses using logistic regression models controlling for sex, race/ethnicity, and grade, $p < 0.05$. Significant linear trends (if present) across all available years are described first followed by linear changes in each segment of significant quadratic trends (if present).
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National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention
Division of Adolescent and School Health

Trends in the Prevalence of Behaviors that Contribute to Violence on School Property
National YRBS: 1991–2013

The national Youth Risk Behavior Survey (YRBS) monitors priority health risk behaviors that contribute to the leading causes of death, disability, and social problems among youth and adults in the United States. The national YRBS is conducted every two years during the spring semester and provides data representative of 9th through 12th grade students in public and private schools throughout the United States.

Percentages	Long term Change ¹	Change from 2011-2013 ²
Carried a weapon on school property (such as a gun, knife, or club on at least 1 day during the 30 days before the survey)		
— 11.8 9.8 8.3 6.9 6.4 6.1 6.5 5.9 5.8 5.4 5.2	Decreased 1991–2013 Decreased 1991–1999 Decreased 1999–2013	No change
Were threatened or injured with a weapon on school property (such as a gun, knife, or club one or more times during the 12 months before the survey)		
— 7.3 8.4 7.4 7.7 8.9 9.2 7.9 7.8 7.7 7.4 6.9	Decreased 1991–2013 No change 1991–2005 Decreased 2005–2013	No change
Were in a physical fight on school property (one or more times during the 12 months before the survey)		
18.2 15.3 14.8 14.2 12.5 12.8 13.6 12.4 11.1 12.0 8.1	Decreased 1991–2013	Decreased
Did not go to school because they felt unsafe at school or on their way to or from school (on at least 1 day during the 30 days before the survey)		
— 4.4 4.5 4.0 3.2 3.6 3.4 4.0 3.5 3.0 3.9 7.1	Increased 1991–2013	No change
Were bullied on school property (during the 12 months before the survey)		
— — — — — — — — — — 19.9 20.1 19.6	No change 2009–2013	No change

¹ Based on linear and quadratic trend analyses using logistic regression models controlling for sex, race/ethnicity, and grade, $p < 0.05$. Significant linear trends (if present) across all available years are described first followed by linear changes in each segment of significant quadratic trends (if present).
² Based on t-test analysis, $p < 0.05$.
³ Not available.

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National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention
Division of Adolescent and School Health

Trends in the Prevalence of Behaviors that Contribute to Unintentional Injury
National YRBS: 1991–2013

The national Youth Risk Behavior Survey (YRBS) monitors priority health risk behaviors that contribute to the leading causes of death, disability, and social problems among youth and adults in the United States. The national YRBS is conducted every two years during the spring semester and provides data representative of 9th through 12th grade students in public and private schools throughout the United States.

Percentages	Long term Change ¹	Change from 2011-2013 ²
Used or rode on a bicycle helmet (among students who had ridden a bicycle during the 12 months before the survey)		
96.2 92.0 92.8 88.4 85.3 84.7 83.9 83.4 83.1 84.7 87.5 87.5	Decreased 1991–2013 Decreased 1991–2005 Increased 2005–2013	No change
Never or rarely wore a seat belt (when riding in a car driven by someone else)		
23.9 19.1 21.7 19.3 16.4 14.1 13.2 10.2 11.1 9.7 7.7 7.6	Decreased 1991–2013	No change
Rode with a driver who had been drinking alcohol (in a car or other vehicle one or more times during the 30 days before the survey)		
39.9 35.3 38.8 36.9 33.1 30.7 30.2 28.3 29.1 29.3 24.1 21.9	Decreased 1991–2013	No change

¹ Based on linear and quadratic trend analyses using logistic regression models controlling for sex, race/ethnicity, and grade, $p < 0.05$. Significant linear trends (if present) across all available years are described first followed by linear changes in each segment of significant quadratic trends (if present).
² Based on t-test analysis, $p < 0.05$.

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National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention
Division of Adolescent and School Health

Injury-Related Comparison Fact Sheets

Alabama 2013 and United States 2013 Results

[Modify](#)

High School Youth Risk Behavior Survey						
Question	Alabama 2013	United States 2013	p-value	Alabama 2013 More Likely Than United States 2013	United States 2013 More Likely Than Alabama 2013	No Difference
Unintentional Injuries and Violence						
Never or rarely wore a bicycle helmet (among students who had ridden a bicycle during the 12 months before the survey)	92.5 (89.5–94.7) 901 [†]	87.9 (85.0–90.2) 8,723	0.01	●		
Never or rarely wore a seat belt (when riding in a car driven by someone else)	9.0 (6.9–11.6) 1,568	7.6 (6.4–9.1) 13,559	0.30			●
Rode with a driver who had been drinking alcohol (in a car or other vehicle one or more times during the 30 days before the survey)	26.1 (22.3–30.2) 1,558	21.9 (20.0–23.9) 13,545	0.05			●
Drove when drinking alcohol (one or more times during the 30 days before the survey, among students who had driven a car or other vehicle during the 30 days before the survey)	9.8 (7.4–12.9) 1,128	10.0 (8.5–11.8) 7,858	0.89			●
Texted or e-mailed while driving a car or other vehicle (on at least 1 day during the 30 days before the survey, among students who had driven a car or other vehicle during the 30 days before the survey)	44.9 (38.3–51.7) 1,168	41.4 (38.2–44.7) 8,019	0.33			●
Carried a weapon (such as, a gun, knife, or club on at least 1 day during the 30 days before the survey)	23.1 (20.0–26.5) 1,502	17.9 (16.5–19.4) 13,252	0.00	●		
Carried a gun (on at least 1 day during the 30 days before the survey)	9.2 (7.6–11.0) 1,532	5.5 (4.8–6.3) 13,308	0.00	●		
Carried a weapon on school property (such as, a gun, knife, or club on at least 1 day during the 30 days before the survey)	5.5 (4.4–6.8) 1,537	5.2 (4.4–6.2) 13,354	0.71			●
Were threatened or injured with a weapon on school property	9.9 (7.7–12.6) 1,572	6.9 (6.2–7.7) 13,555	0.02	●		

FY2014 Journal Articles DASH and NCIPC Co-Authors

Published in FY2014

- Demissie Z, Lowry R, Eaton DK, Hertz MF, Lee SM. Associations of school violence with physical activity and sedentary behaviors among U.S. high school students. *Journal of Physical Activity and Health* 2014;11(4):705-711.
- Olsen EO, Kann L, Vivolo-Kantor A, Kinchen S, McManus T. School violence and bullying among sexual minority high school students, 2009-2011. *Journal of Adolescent Health* 2014;55(3):432-438.

In process

- Trauma and related risk behaviors
- Health risk behaviors associated with bullying
- Teen dating violence among US high school students
- Physical and sexual teen dating violence among sexual minority high school students
- Physical and sexual teen dating violence and associations with school violence and bullying
- Driving rates of US high school students

Policy and Program Applications

- Describe risk behaviors
- Create awareness
- Set program goals
- Develop programs and policies
- Support health-related legislation
- Seek funding

Describe Risk Behaviors

- Overall and among subgroups of youth
- How risk behaviors are interrelated

Create Awareness

Among:

- Legislators, boards of education, and school administrators
- Parents
- Community members
- School staff
- Students
- Media

Set Program Goals

- Strategic plans for school health programs
- Healthy People 2020 objectives (n=20)
 - IVP-34 Physical fighting
 - IVP-35 Bullying
 - IVP-36 Weapon carrying on school property
- CDC Cooperative Agreement Performance Measures (FOA's 1305 – chronic disease prevention and 1308 – HIV prevention)

Develop Programs and Policies

- School health programs and policies
- Programs and policies for youth in high risk situations
- Instructional guides and materials
- Professional development programs for teachers

Support Health-Related Legislation

- School health program requirements
- School health council requirements
- **Drug-free or weapon-free school zone laws**
- Minors' access laws
- **Drinking and driving laws**
- Bans on billboards and other advertising
- Competitive food policies
- School health services policies
- **Anti-bullying legislation**
- School environment policies

Seek Funding

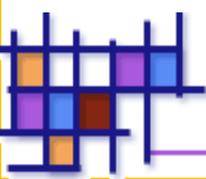
- Support funding requests to federal, state, and private agencies and foundations

Specific State and Local Uses of YRBS Data

YRBSS Information

www.cdc.gov/yrbss

- Youth Online
- Questionnaire and item rationale
- Morbidity and Mortality Weekly Report Surveillance Summaries
- Data and codebooks for the national YRBS
- Publications, journal articles, and fact sheets
- Technical resources



YRBSS

Youth Risk Behavior Surveillance System