

The CBHSQ Report

Short Report

May 18, 2015

STATE ESTIMATES OF ADOLESCENT CIGARETTE USE AND PERCEPTIONS OF RISK OF SMOKING: 2012 AND 2013

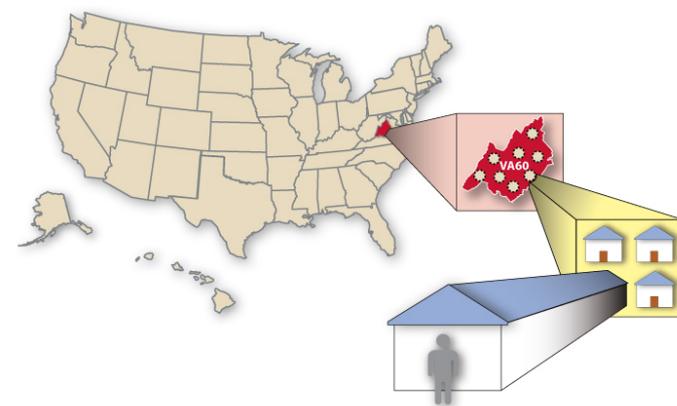
AUTHORS

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INTRODUCTION

Cigarette smoking and exposure to secondhand smoke causes more than 443,000 deaths every year, and another 8.6 million people suffer from a serious illness related to smoking.¹ According to the Surgeon General, if current trends continue, 5.6 million U.S. youths who are currently younger than 18 years of age will die prematurely during adulthood because of their smoking.² Thus, cigarette smoking imposes substantial health and financial costs on our nation and its states.³ Preventing adolescents from starting to smoke may be the most effective way to reduce the health and economic burden of tobacco-related disease in the future. Between 1991 and 2013, there was a significant linear decrease in the prevalence of cigarette use among high school students from 27.5 to 15.7 percent.⁴ It is useful to state policymakers and prevention specialists to assess whether the decline in smoking occurred across all states among adolescents aged 12 to 17.

States have been at the center of efforts to reduce adolescent smoking through cigarette taxation, enactment of laws that restrict smoking in public places, enforcement of laws that prohibit the sale and distribution of tobacco products to adolescents, and funding smoking prevention and cessation programs. As longitudinal research has shown, adolescents' attitudes about the risks associated with cigarette smoking are often closely related to their use, with an inverse association between use and risk perceptions (i.e., the prevalence of use is lower among those who perceive high risk of harm from cigarette use).⁵ This corresponds to states with high prevalence of adolescent cigarette use typically having a low prevalence of adolescent perception that there is a great health risk from smoking. Therefore, many state and national prevention programs focus on teaching youths about the harm that smoking may do to their health and social life. State-level information about cigarette use and attitudes about smoking can provide states with vital data to monitor changes over time and to inform enforcement, educational, and prevention efforts.



In Brief

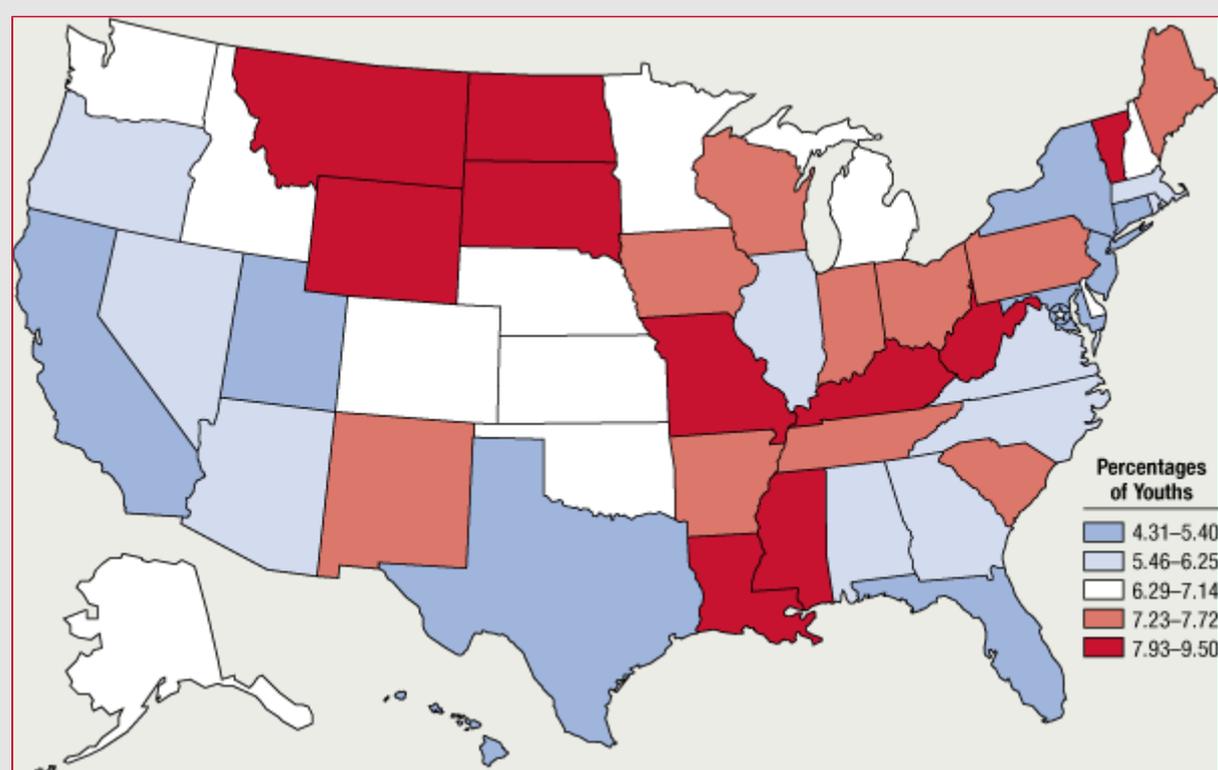
- Based on combined 2012 and 2013 data, rates of past month cigarette use among adolescents aged 12 to 17 was 6.1 percent nationally and ranged from 4.3 percent in California to 9.5 percent in Kentucky.
- Rates of adolescent perceptions of great risk of smoking one or more packs of cigarettes per day ranged from 59.1 percent in Alaska to 70.4 percent in Florida.
- Compared to combined 2002 and 2003 data, the 2012 and 2013 data show that 50 out of 51 states experienced a statistically significant decrease in the rate of adolescent past month cigarette use, and there were no states with a statistically significant increase in adolescent smoking.

This issue of *The CBHSQ Report* uses data from the combined 2012 and 2013 National Surveys on Drug Use and Health (NSDUHs) to present state (including the District of Columbia) estimates of past month cigarette use and perceptions of great risk of smoking one or more packs of cigarettes per day among persons aged 12 to 17.⁶ Findings in this report are annual averages based on combined 2012 and 2013 NSDUH data from approximately 45,000 respondents.⁷ These estimates are rank ordered from highest to lowest and divided into quintiles (fifths).⁸ Additionally, the combined 2012 and 2013 data are compared with combined 2002 and 2003 data to examine changes in these measures over time.

STATE ESTIMATES OF ADOLESCENT PAST MONTH CIGARETTE USE

The 2012 and 2013 data indicate that about 1 in 16 adolescents (6.1 percent) smoked cigarettes in the past month. Rates of adolescent past month cigarette use ranged from 4.3 percent in California to 9.5 percent in Kentucky (Figure 1).

Figure 1. Percentages of past month cigarette use among persons aged 12 to 17, by state: 2012 and 2013



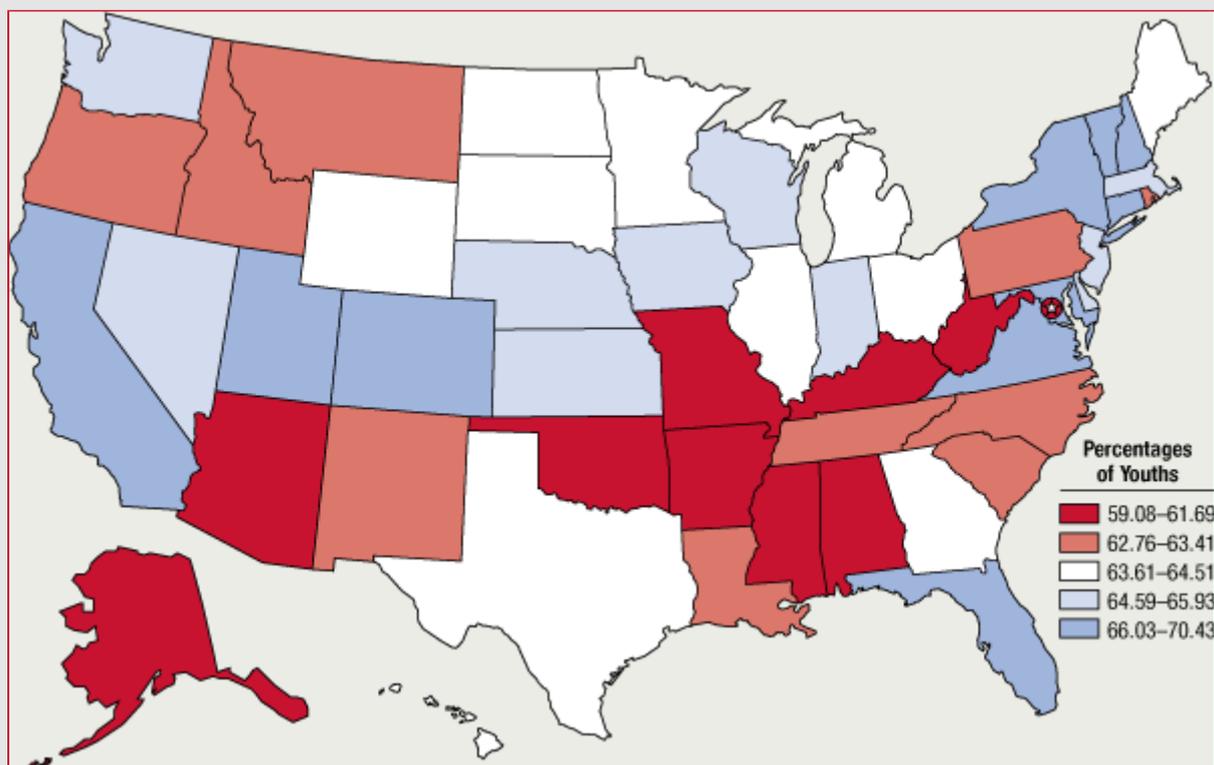
Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Surveys on Drug Use and Health (NSDUHs), 2012 and 2013.

Of the 10 states with the highest rates of past month cigarette use among adolescents, 4 were in the South (Louisiana, Kentucky, Mississippi, and West Virginia), 3 were in the Midwest (South Dakota, North Dakota, and Missouri), 2 were in the West (Montana and Wyoming), and 1 was in the Northeast (Vermont).⁹ Of the 10 states with the lowest rates of past month cigarette use among adolescents, 4 were in the South (District of Columbia, Florida, Maryland, and Texas), 3 were in the West (California, Utah, and Hawaii), and 3 were in the Northeast (Connecticut, New Jersey, and New York).

STATE ESTIMATES OF ADOLESCENTS' PERCEPTION OF GREAT RISK OF CIGARETTE USE

The 2012 and 2013 data indicate that, nationwide, about two in three adolescents (65.0 percent) perceived great risk from smoking one or more packs of cigarettes per day. Among adolescents, perception of great risk from smoking one or more packs of cigarettes per day among this group ranged from 59.1 percent in Alaska to 70.4 percent in Florida (Figure 2).

Figure 2. Percentages of perceptions of great risk of smoking one or more packs of cigarettes per day among persons aged 12 to 17, by state: 2012 and 2013



Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Surveys on Drug Use and Health (NSDUHs), 2012 and 2013

Of the 10 states with the highest rates of adolescent perception of great risk from smoking one or more packs a day, 4 were in the Northeast (New Hampshire, Vermont, New York, and Connecticut), 3 were in the West (Colorado, California, and Utah), and 3 were in the South (Maryland, Virginia, and Florida). Of the 10 states with the lowest rates of perception of great risk from smoking one or more packs of cigarettes per day, 7 were in the South (Alabama, Arkansas, District of Columbia, Kentucky, Mississippi, Oklahoma, and West Virginia), 2 were in the West (Alaska and Arizona), and 1 was in the Midwest (Missouri).

CHANGES OVER TIME

When 2002 and 2003 data are compared with 2012 and 2013 data, the nation as a whole experienced a statistically significant reduction in the rate of past month cigarette use among adolescents (from 12.6 to 6.1 percent; Table 1). On an individual state level, 50 states experienced a statistically significant decrease in the rate of adolescent past month cigarette use, and 1 state experienced no significant change.

Comparisons of the 2002 and 2003 data with the 2012 and 2013 data indicate that there was an increase at the national level in the rate of adolescent perception of great risk from smoking one or more packs of cigarettes per day (from 63.7 to 65.0 percent). On an individual state level, 4 states experienced a statistically significant increase in rate of adolescent perception of great risk from smoking, 1 state experienced a significant decline in rate of adolescent perceptions of great risk from smoking, and 46 experienced no change.

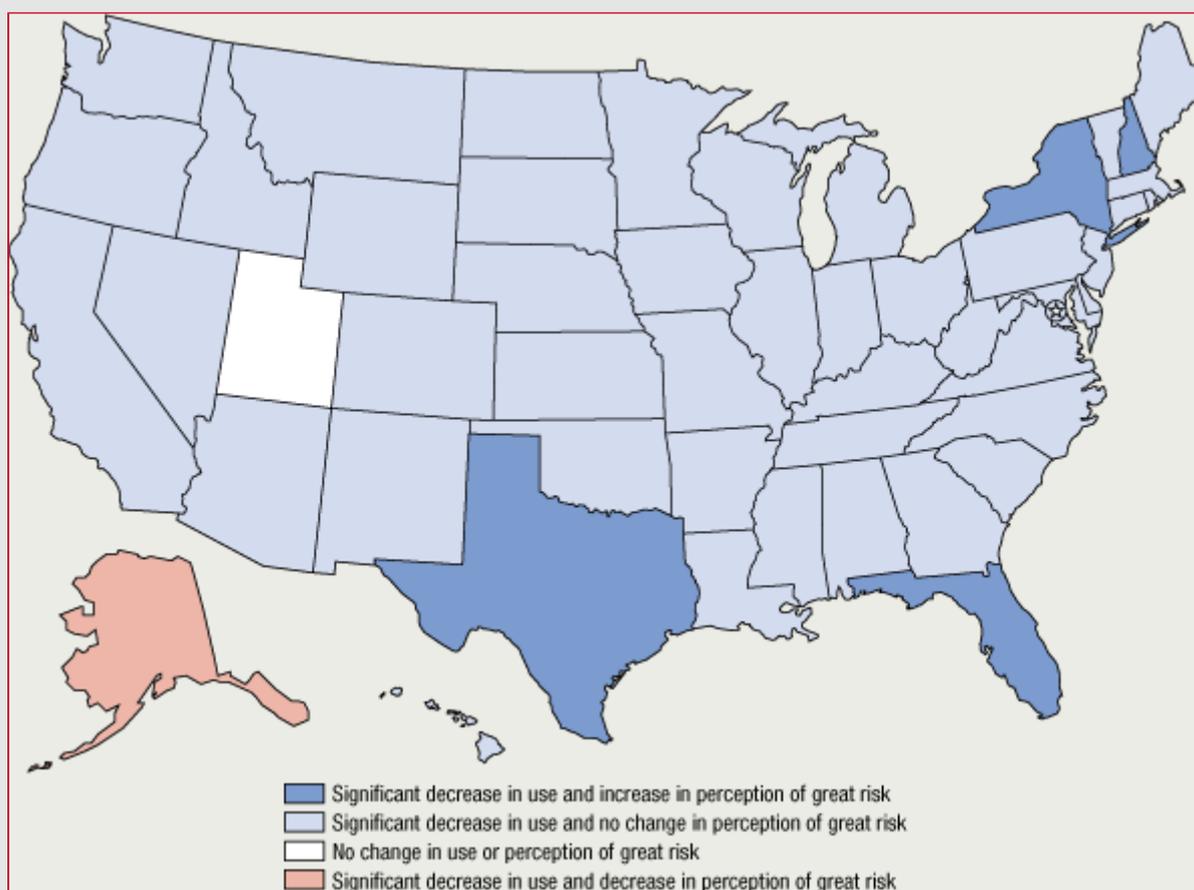
Table 1. Percentages of past month cigarette use and perceptions of great risk of smoking one or more packs of cigarettes per day among persons aged 12 to 17, by state: 2002-2003 and 2012-2013

State	Past month cigarette use		Perception of great risk of smoking one or more packs of cigarettes per day	
	2002-2003	2012-2013	2002-2003	2012-2013
Nation	12.57	6.08*	63.67	64.96*
Alabama	13.69	6.25*	62.18	61.57
Alaska	13.25	6.44*	66.56	59.08*
Arizona	12.84	5.46*	64.39	61.41
Arkansas	16.05	7.56*	61.55	59.96
California	7.48	4.31*	67.07	67.02
Colorado	13.74	6.29*	63.77	66.56
Connecticut	13.45	4.87*	64.74	68.51
Delaware	14.07	6.85*	63.20	65.64
District of Columbia	7.10	4.62*	61.87	60.00
Florida	12.26	4.95*	63.06	70.43*
Georgia	12.83	6.05*	64.49	64.42
Hawaii	8.78	5.40*	65.39	63.61
Idaho	12.48	6.76*	65.57	63.22
Illinois	13.00	5.89*	64.55	64.23
Indiana	14.39	7.72*	64.18	64.91
Iowa	14.27	7.25*	61.99	65.93
Kansas	13.95	6.29*	60.16	64.71
Kentucky	17.62	9.50*	58.90	59.93
Louisiana	15.01	8.10*	59.33	62.94
Maine	12.16	7.23*	64.49	64.43
Maryland	11.08	5.05*	65.27	66.03
Massachusetts	11.69	5.57*	67.22	65.42
Michigan	13.59	7.14*	64.02	64.11
Minnesota	15.67	7.04*	63.18	64.29
Mississippi	12.83	8.11*	59.22	59.44
Missouri	17.88	8.63*	61.78	61.18
Montana	16.10	7.93*	64.76	63.27
Nebraska	16.36	6.79*	63.18	65.29
Nevada	12.73	6.05*	64.24	64.59
New Hampshire	14.03	7.06*	59.52	66.29*
New Jersey	11.83	5.12*	64.03	65.05
New Mexico	12.34	7.36*	61.12	62.89
New York	11.81	5.10*	64.32	67.91*
North Carolina	14.78	6.18*	60.76	63.08
North Dakota	17.53	8.10*	61.29	64.01
Ohio	14.52	7.35*	61.92	63.90
Oklahoma	14.96	6.57*	60.58	60.93
Oregon	11.29	6.23*	68.14	63.41
Pennsylvania	14.73	7.61*	62.31	62.76
Rhode Island	13.72	6.17*	65.01	63.40
South Carolina	12.21	7.33*	62.27	63.06
South Dakota	19.79	7.95*	60.68	64.51
Tennessee	14.33	7.62*	62.38	63.27
Texas	11.65	5.17*	61.14	64.25*
Utah	6.57	5.40	71.49	69.43
Vermont	14.84	8.11*	63.59	66.83
Virginia	14.17	6.13*	64.05	66.45
Washington	10.84	6.64*	66.48	65.03
West Virginia	17.34	8.94*	59.35	61.69
Wisconsin	15.32	7.39*	63.58	65.62
Wyoming	12.78	9.37*	64.05	64.01

*Difference between 2012-2013 and 2002-2003 is statistically significant at .05 level.
Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Surveys on Drug Use and Health (NSDUHs), 2002, 2003, 2012, and 2013.

Four states had a statistically significant decrease in adolescent cigarette use and an increase in rate of adolescent perception of great risk from smoking (Figure 3; Table 1); these states are Texas, New Hampshire, New York, and Florida.⁹ Alaska was the only state that had a significant decrease in adolescent cigarette use and a decrease in rate of adolescent perception of great risk from smoking. For 45 states, there was a statistically significant decrease in the rate of adolescent cigarette use but no change in the rate of adolescent perception of great risk from smoking. For 1 state (Utah), there was no statistically significant change for either measure.

Figure 3. Significant changes in percentages of past month cigarette use and perception of great risk of smoking one or more packs of cigarettes per day among persons aged 12 to 17, by state: 2002-2003 versus 2012-2013



Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Surveys on Drug Use and Health (NSDUHs), 2002, 2003, 2012, and 2013.

DISCUSSION

The prevalence of cigarette use initiation in childhood or adolescence has prompted the Surgeon General to declare tobacco use to be a “pediatric epidemic,” affirming the importance of tobacco use prevention and control measures that target youths.¹¹ Reducing smoking among adolescents will improve the nation's health both immediately and in the long term. Changing attitudes toward smoking can help to reduce smoking among youths.³ The percentages of youths reporting the use of cigarettes were lower among those who perceived great risk in smoking one or more packs of cigarettes per day than among those who did not perceive great risk in doing so.⁵

Findings in this report suggest that efforts to reduce smoking and change attitudes about smoking among adolescents have resulted in considerable progress, although this progress was not uniform across all states. Youths' perceptions of risk have not changed significantly in most states, although the rate of cigarette smoking among youths has declined in nearly every state. Highlighting the prevalence of adolescent cigarette use and attitudes toward use in each state, as well as monitoring changes, may help federal, state, and local policymakers continue to plan for and allocate resources to combat adolescent smoking, including efforts to reduce the availability of tobacco products to young people, raise awareness about smoking and its consequences, and improve prevention efforts. Even as states make progress in decreasing adolescent smoking, e-cigarette use poses a related health risk among youths. Youths who had never smoked conventional cigarettes but who had used e-

cigarettes were almost twice as likely to have intentions to smoke conventional cigarettes as those who had never used e-cigarettes.¹¹ Current research indicates that cigarette use rates are much higher than e-cigarette use among high school students.¹² Future research on both cigarette use and e-cigarette use among youths is needed to continue monitoring these developments.

For more information on addressing cigarette use among youths, see the following Web sites: <http://store.samhsa.gov/shin/content/PHD633/PHD633.pdf> and <http://www.samhsa.gov/building-blocks>.

The combined 2012 to 2013 NSDUH state estimates for adolescent cigarette use and 24 additional behavioral health measures and the methodology that generated the state estimates are available online.⁶ National maps and detailed tables showing state estimates for the 24 additional outcomes (e.g., substance use; substance use disorders; treatment; mental illness; depression; and suicidal thoughts) are provided at <http://www.surgeongeneral.gov/library/reports/preventing-youth-tobacco-use/full-report.pdf>

END NOTES

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6. Center for Behavioral Health Statistics and Quality. (2014). *2012-2013 NSDUH state estimates of substance use and mental disorders*. Retrieved from <http://www.samhsa.gov/data/population-data-nsduh/reports?tab=33>
7. All estimates are based on a small area estimation (SAE) methodology in which state-level NSDUH data are combined with local-area county and census block group/tract-level data from the state. This methodology provides more precise estimates of state level outcomes than those based solely on the sample. The precision of the SAE estimates is improved by combining data across 2 years (i.e., 2012 and 2013).
8. Estimates were divided into quintiles for ease of presentation, but differences between states and quintiles were not tested for statistical significance. At times, more than 10 or fewer than 10 states were assigned to each quintile because of ties in the estimated prevalence rates.
9. The West has 13 states: AK, AZ, CA, CO, HI, ID, MT, NM, NV, OR, UT, WA, and WY. The South has 16 states plus the District of Columbia: AL, AR, DE, FL, GA, KY, LA, MD, MS, NC, OK, SC, TN, TX, VA, and WV. The Northeast has 9 states: CT, MA, ME, NH, NJ, NY, PA, RI, and VT. The Midwest has 12 states: IA, IL, IN, KS, MI, MN, MO, ND, NE, OH, SD, and WI.
10. Tests of significance were conducted separately on the difference in the rates of cigarette use from combined 2002 to 2003 and combined 2012 to 2013 along with the difference in the percentage perceiving great risk for the same two time periods. However, no tests of significance were conducted jointly between the difference in cigarette use and the difference in the perceptions of great risk.
11. U.S. Department of Health and Human Services, Public Health Service, Office of the Surgeon General. (2012). *Preventing tobacco use among youth and young adults: A report of the Surgeon General*. Rockville, MD: Author. Retrieved from <http://www.surgeongeneral.gov/library/reports/preventing-youth-tobacco-use/full-report.pdf>
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SUGGESTED CITATION

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SUMMARY

Background: Adolescents' attitudes about the risks associated with cigarette smoking are often closely related to their use. As States have been at the center of efforts to reduce adolescent smoking, examining adolescents' attitudes about the risks associated with smoking provides needed prevention information. **Method:** Combined 2012 and 2013 National Surveys on Drug Use and Health (NSDUHs) state (including the District of Columbia) estimates of past month cigarette use and perceptions of great risk of smoking one or more packs of cigarettes per day among persons aged 12 to 17 were analyzed. Additionally, the combined 2012 and 2013 data are compared with combined 2002 and 2003 data to examine changes in these measures over time. **Results:** Findings in this report suggest that efforts to reduce smoking and change attitudes about smoking among adolescents have resulted in considerable progress, although this progress was not uniform across all states. Youths' perceptions of risk have not changed significantly in most states, although the rate of cigarette smoking among youths has declined in nearly every state. **Conclusion:** Highlighting the prevalence of adolescent cigarette use and attitudes toward use in each state, as well as monitoring changes, may help policymakers continue to combat adolescent smoking, including efforts to reduce the availability of tobacco products to young people, raise awareness about smoking and its consequences, and improve prevention efforts.

Keywords: cigarettes, National Survey on Drug Use and Health, NSDUH, risk

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KEYWORDS

2002, 2003, 2012, 2013, Adolescents as Population Group, All US States Only, Arizona, Arkansas, Awareness, California, Children as Audience, Colorado, Connecticut, Cultural Competence, Delaware, District of Columbia, Drug Use Trends, Florida, Georgia, Hawaii, Idaho, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Montana, Multi-Year Trend, Nebraska, Nevada, New Hampshire, New Jersey, New Mexico, New York, North Carolina, North Dakota, Ohio, Oklahoma, Oregon, Parents and Caregivers, Pennsylvania, Policymakers, Population Data, Prevention, Prevention Professionals, Public Health Professionals, Public Officials, Research and Methodology, Researchers, Rhode Island, Risk & Protective Factors, Short Report, South Carolina, South Dakota, Substance Abuse, Tennessee, Texas, Tobacco, Utah, Vermont, Virginia, Washington, West Virginia, Wisconsin, Wyoming

The Substance Abuse and Mental Health Services Administration (SAMHSA) is the agency within the U.S. Department of Health and Human Services that leads public health efforts to advance the behavioral health of the nation. SAMHSA's mission is to reduce the impact of substance abuse and mental illness on America's communities.

The National Survey on Drug Use and Health (NSDUH) is an annual survey sponsored by The Substance Abuse and Mental Health Services Administration (SAMHSA). The data used in this report are based on information obtained in 2002 through 2013 from 816,900 people aged 12 or older. The Survey collects data by administering questionnaires to a representative sample of the population through face-to-face interviews at their place of residence. Computer-assisted interviewing methods are used to provide a private and confidential setting for respondents to complete the interview.

The NSDUH Report is prepared by The Center for Behavioral Health Statistics and Quality (CBHSQ), SAMHSA, and by RTI International in Research Triangle Park, North Carolina. (RTI International is a trade name of Research Triangle Institute.)

Information on the most recent NSDUH is available in the following publication:

Center for Behavior Health Statistics and Quality. (2014). Results from the 2013 National Survey on Drug Use and Health: Summary of national findings (HHS Publication No. SMA 14-4863, NSDUH Series H-48). Rockville, MD : Substance Abuse and Mental Health Services Administration.

Also available online: <http://www.samhsa.gov/data/population-data-nsduh>.