

The NSDUH Report

June 2010

State Estimates of Adolescent Cigarette Use and Perceptions of Risk from Smoking

Cigarette smoking causes more than 400,000 deaths every year and imposes substantial health and financial costs on our Nation and States.¹ 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. In recent years, significant progress has been made in reducing adolescent smoking,² but there is still much work left to be done.

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. Many prevention programs focus on teaching youths about the harm that smoking may do to their health and social life, and longitudinal research has shown that smoking initiation is directly related to perceptions of risks and benefits from smoking.³ 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.

This issue of *The NSDUH Report* uses data from the combined 2007 and 2008 National Surveys on Drug Use and Health (NSDUHs) to present estimates for the States and the District of Columbia of past month cigarette use and perceptions of great risk of harm from smoking one or more packs of cigarettes per day among persons

In Brief

- Combined 2007 and 2008 data indicate that the rates of past month cigarette use among adolescents aged 12 to 17 ranged from a low of 5.77 percent in Utah to a high of 14.47 percent in Kentucky
- Rates of perceptions of great risk of harm from smoking one or more packs of cigarettes per day ranged from a low of 63.30 percent in Alabama to a high of 77.00 percent in Utah
- Comparisons of combined 2002 and 2003 data with combined 2007 and 2008 data showed that 35 States experienced a statistically significant reduction in the rate of adolescent past month cigarette use, and 35 States and the District of Columbia had an increase in the percentage of adolescents perceiving great risk from smoking; 27 States experienced both of these trends, and there were no States with a statistically significant increase in adolescent smoking or decrease in perceived risk

aged 12 to 17.^{4,5} These estimates are rank ordered from highest to lowest and divided into quintiles (fifths).⁶ Additionally, the combined 2007 and 2008 data are compared with the combined 2002 and 2003 data to examine changes in these measures over time.

State Estimates of Past Month Cigarette Use

Combined 2007 and 2008 data indicate that about 1 in 10 (9.46 percent) adolescents smoked cigarettes in the past month. Rates of past month cigarette use ranged from a low of 5.77 percent in Utah to a high of 14.47 percent in Kentucky (Figure 1).

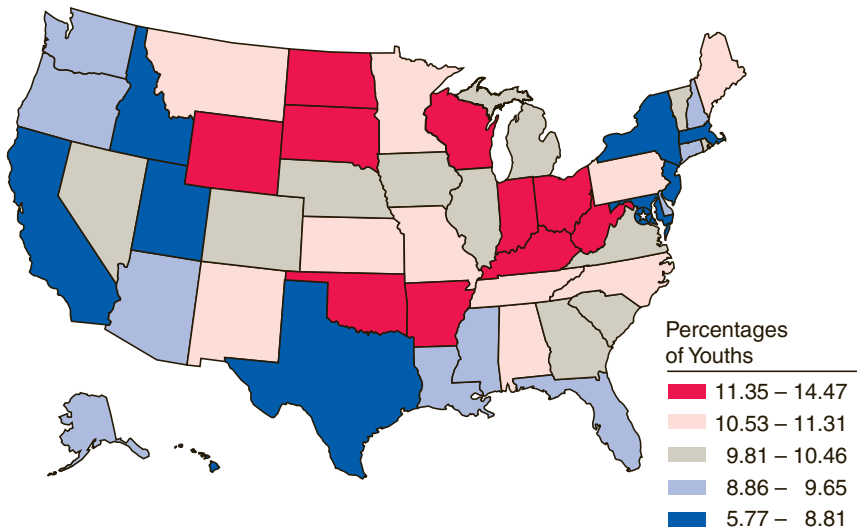
Of the 10 States with the highest rates of past month cigarette use, 5 were in the Midwest (Indiana, North Dakota, Ohio, South Dakota, and Wisconsin), 4 were in the South (Arkansas, Kentucky, Oklahoma, and West Virginia), and 1 was in the West (Wyoming).⁷ Of the 10 States and jurisdictions with the lowest rates of past month cigarette use, 3 were in the Northeast (Massachusetts, New Jersey, and New York), 4 were in the West (California, Hawaii, Idaho, and Utah), and 3 were in the South (Maryland, Texas, and the District of Columbia).

State Estimates of Perceptions of Great Risk of Harm from Cigarette Use

Combined 2007 and 2008 data indicate that about 7 in 10 (69.26 percent) adolescents perceived great risk of harm from smoking one or more packs of cigarettes per day. The rate of perceived great risk ranged from a low of 63.30 percent in Alabama to a high of 77.00 percent in Utah (Figure 2).

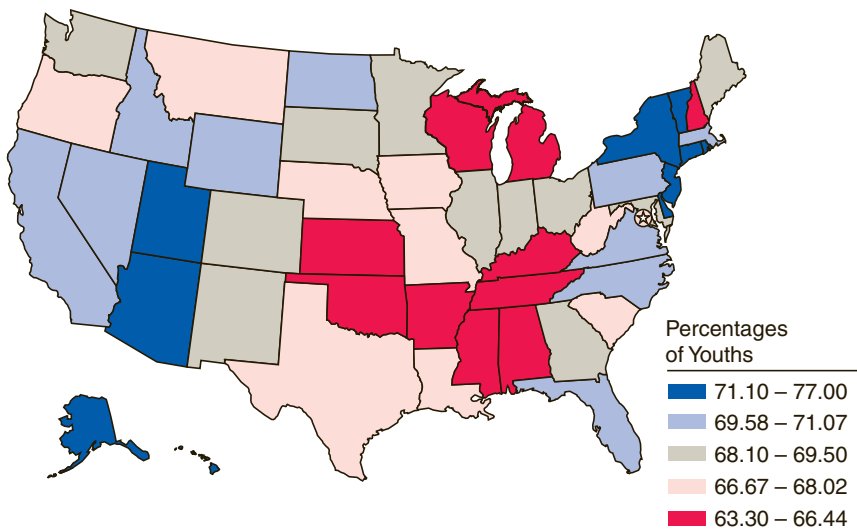
Of the 10 States with the highest rates of perceived great risk, 5 were in the Northeast (Connecticut, New Jersey, New York, Rhode Island, and Vermont), 4 were in the West (Alaska, Arizona, Hawaii, and Utah), and 1 was in the South (Delaware). Of the 10 States with the lowest rates of perceived great risk, 6 were in the

Figure 1. Percentages of Past Month Cigarette Use among Youths Aged 12 to 17, by State: 2007 and 2008



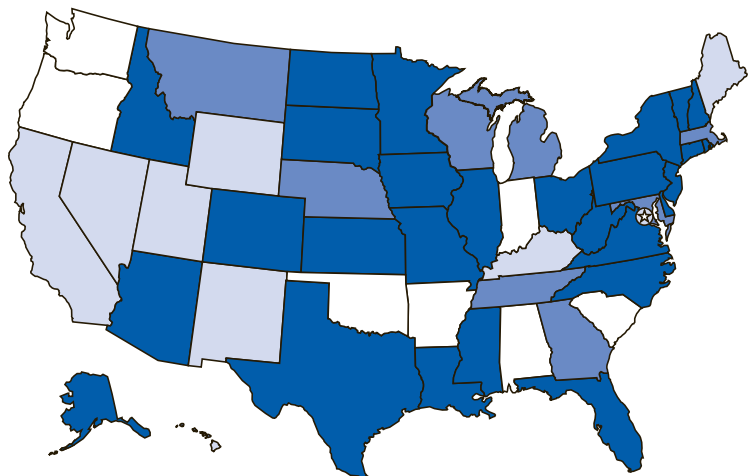
Source: 2007 to 2008 SAMHSA National Surveys on Drug Use and Health (NSDUHs).

Figure 2. Percentages of Perceptions of Great Risk of Harm from Smoking One or More Packs of Cigarettes Per Day among Youths Aged 12 to 17, by State: 2007 and 2008



Source: 2007 to 2008 SAMHSA National Surveys on Drug Use and Health (NSDUHs).

Figure 3. States with Significant Change in Past Month Cigarette Use and Perceptions of Great Risk of Harm from Smoking One or More Packs of Cigarettes Per Day among Youths Aged 12 to 17: 2002 and 2003 versus 2007 and 2008



■ Significant Decrease in Use and Increase in Perception of Great Risk
■ Significant Decrease in Use and No Change in Perception of Great Risk
■ Significant Increase in Perception of Great Risk and No Change in Use
■ No Significant Change in Either Use or Perception of Great Risk

Source: 2002, 2003, 2007, and 2008 SAMHSA National Surveys on Drug Use and Health (NSDUHs).

South (Alabama, Arkansas, Kentucky, Mississippi, Oklahoma, and Tennessee), 3 were in the Midwest (Kansas, Michigan, and Wisconsin), and 1 was in the Northeast (New Hampshire).

Changes over Time

When combined 2002 and 2003 data are compared with data combined from 2007 and 2008, the Nation as a whole experienced a statistically significant reduction in the rate of past month cigarette use among adolescents (from 12.57 to 9.46 percent) and an increase in the rate of perceived great risk of harm from smoking one or more packs of cigarettes per day (from 63.67 to 69.26 percent). Similarly, 27 States showed both a decrease in the rate of use and an increase in the rate of perceived great risk (Figure 3). Eight States had a decrease in the rate of use but no increase in the rate of perceived great risk, and eight States and the District of Columbia had an increase in the rate of perceived great risk but no decrease in the rate of use. Seven States had no

statistically significant change for either measure, and no States had an increase in use or a decrease in perceived great risk.⁸

Discussion

Cigarette use plays a major role in the health of the citizens of every State in the Nation. These findings suggest that efforts to reduce smoking and to change attitudes about smoking among adolescents have resulted in considerable progress, although this progress was not uniform across all States. These successes will improve the Nation's health in both the short term and the long term. Highlighting the prevalence of cigarette use and attitudes toward use in each State, as well as monitoring changes, may help State and Federal policymakers continue to plan for and improve prevention efforts.

End Notes

¹ Adhikari, B., Kahende, J., Malarcher, A., Pechacek, T., & Tong, V. (2008). Smoking-

attributable mortality, years potential life lost, and productivity losses—United States, 2000-2004. *Morbidity and Mortality Weekly Report*, 57(45), 1226-1228. [Available at <http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5745a3.htm>]

² Office of Applied Studies. (2009). *Results from the 2008 National Survey on Drug Use and Health: National findings* (HHS Publication No. SMA 09-4434, NSDUH Series H-36). Rockville, MD: Substance Abuse and Mental Health Services Administration.

³ Song, A. V., Morrell, H. E., Cornell, J. L., Ramos, M. E., Biehl, M., Kropp, R. Y., & Halpern-Felsher, B. L. (2009). Perceptions of smoking-related risks and benefits as predictors of adolescent smoking initiation. *American Journal of Public Health*, 99(3), 487-492.

⁴ The data for this report are based on tables D14 and D15 from the report: Office of Applied Studies. (2010). *State estimates of substance use from the 2007-2008 National Surveys on Drug Use and Health* (HHS Publication No. SMA 10-4472, NSDUH Series H-37). Rockville, MD: Substance Abuse and Mental Health Services Administration. This report provides State-level estimates for a more extensive set of measures of substance use and substance use disorders and is available at <http://oas.samhsa.gov/2k8State/toc.cfm>. In addition to the percentages shown in the report, this Web link also provides estimated numbers.

⁵ All estimates in this report 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/track-level data from the State. This model-based methodology provides more precise estimates of substance use at the State level than those based solely on the sample, particularly for smaller States. The precision of the SAE estimates, particularly for States with smaller sample sizes, can be improved significantly by combining data across 2 years (i.e., 2002 to 2003 and 2007 to 2008).

⁶ Estimates were divided into quintiles for ease of presentation and discussion, but differences between States and quintiles were not tested for statistical significance. In some instances, more than 10 or fewer than 10 States were assigned to each quintile because of ties in the estimated prevalence rates.

⁷ 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.

⁸ Tests of significance were conducted separately on the difference in the rates of cigarette use between 2002 to 2003 and 2007 to 2008 and 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.

Suggested Citation

Substance Abuse and Mental Health Services Administration, Office of Applied Studies. (June 2010). *The NSDUH Report: State Estimates of Adolescent Cigarette Use and Perceptions of Risk from Smoking*. Rockville, MD.

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Findings from the SAMHSA 2002 to 2008 National Surveys on Drug Use and Health (NSDUHs)

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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 2007 and 2008 data used in this report are based on information obtained from 44,979 persons aged 12 to 17; the 2002 and 2003 data are based on information obtained from 46,310 persons aged 12 to 17. The survey collects data by administering questionnaires to a representative sample of the population through face-to-face interviews at their place of residence.

The NSDUH Report is prepared by the Office of Applied Studies (OAS), 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:

Office of Applied Studies. (2009). *Results from the 2008 National Survey on Drug Use and Health: National findings* (HHS Publication No. SMA 09-4434, NSDUH Series H-36). Rockville, MD: Substance Abuse and Mental Health Services Administration. Also available online: <http://oas.samhsa.gov>.



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