

The NSDUH Report

March 18, 2014

Recent Declines in Adolescent Inhalant Use

Inhalants are legal, everyday products—including spray paints, glue, and gasoline—that are harmless when used as intended. However, when the vapors from these products are intentionally inhaled to get high, they become potentially toxic and sometimes lethal.¹ Inhalants, which are breathed in through the nose or mouth in a variety of ways, are absorbed quickly through the lungs into the bloodstream. The user experiences a rapid but short-lived intoxication. Monitoring trends in inhalant use is vital to assessing policies intended to reduce inhalant use.

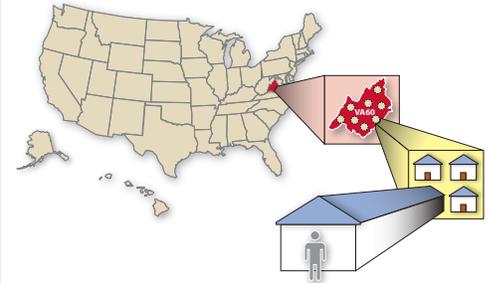
The National Survey on Drug Use and Health (NSDUH) asks respondents aged 12 or older to report on their use of inhalants during the past year and past month. Inhalants are defined in the survey as “liquids, sprays, and gases that people sniff or inhale to get high or to make them feel good.”² NSDUH also asks about the number of days inhalants were used in the past year among past year users. This issue of *The NSDUH Report* examines trends in inhalant use among youths aged 12 to 17 (i.e., adolescents) between 2002 and 2012, focusing on changes between 2011 and 2012.

Overall Trends

In 2012, almost 650,000 adolescents used inhalants in the past year. Past year inhalant use among adolescents generally has been declining since about 2006 (Figure 1). The 2012 rate was statistically lower than the rate in any year between 2002 and 2011. Most recently, rates decreased from 3.3 percent in 2011 to 2.6 percent in 2012.

Recent Trends, by Demographic Characteristics

Decreases in rates of past year inhalant use between 2011 and 2012 were seen among some demographic groups. In 2012, 2.1 percent of males and 3.1 percent of females used inhalants in the past year (Figure 2). Among male adolescents, the 2012 rate was statistically lower than the 2011 rate (2.1 vs. 3.1 percent). By race/ethnicity, rates



IN BRIEF

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Rates of past year inhalant use among adolescents decreased between 2011 and 2012 for several demographic groups, including males, whites, those living in the Northeast and West, and those living in metropolitan areas.

of inhalant use ranged from 1.3 percent among Asians to 4.8 percent among American Indians or Alaska Natives (Figure 2). Among white adolescents, the 2012 rate was statistically lower than the 2011 rate (2.5 vs. 3.0 percent).

Because they are readily available, inhalants are often

among the first drugs that youths use.¹ According to the 2012 NSDUH, inhalant use rates among adolescents peak during the midteen years, with the rate of use among 14 year olds (3.4 percent) being nearly twice that of 12 year olds (1.8 percent; Figure 3). There was a decline in inhalant use between 2011 and

Figure 1. Trends in Past Year Inhalant Use among Adolescents Aged 12 to 17: 2002 to 2012

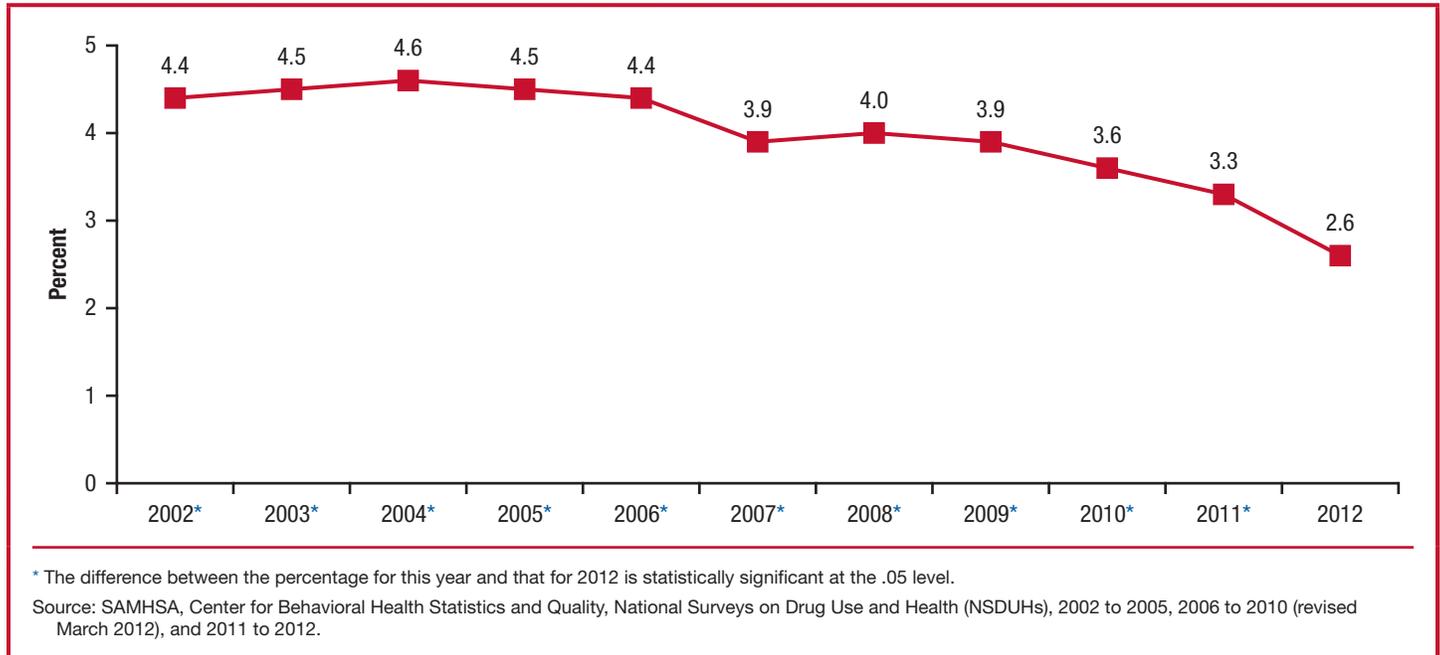
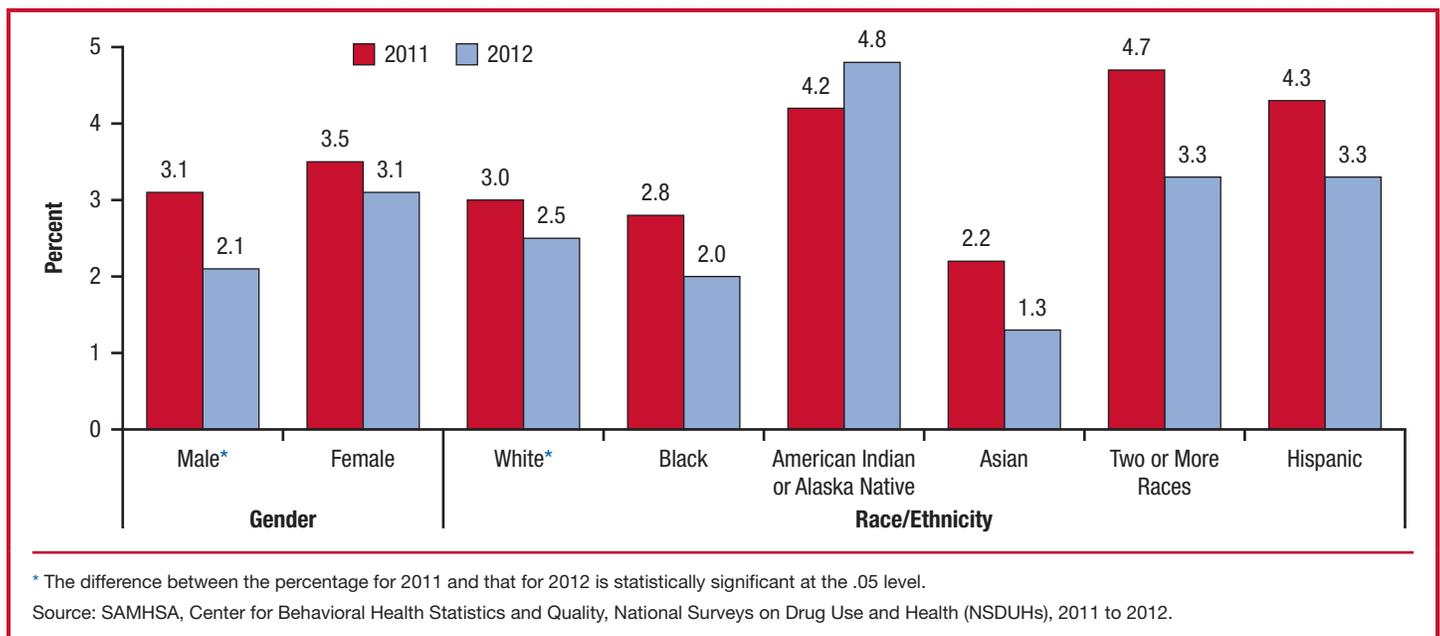


Figure 2. Recent Trends in Past Year Inhalant Use among Adolescents Aged 12 to 17, by Gender and Race/Ethnicity: 2011 and 2012



2012 among 13 year olds. Although the differences appear lower for many other ages, the changes did not reach statistical significance.

Recent Trends, by Geographic Characteristics

The percentage of adolescents using inhalants in the past year also decreased between 2011 and 2012 in some U.S. geographic areas.^{3,4} Specifically, rates declined from 3.5 to 2.1 percent in the Northeast and from 4.3 to 2.8 percent in the West (Table 1). The declines in the Northeast occurred in both the New England and the Middle Atlantic regions; in the West, the decline was only significant in the Pacific region. Although there was no statistically significant decline in inhalant use in the Midwest overall, rates of use in the West North Central region of the Midwest declined from 3.8 percent in 2011 to 2.2 percent in 2012. Decreases were also seen in large metropolitan areas (from 3.3 to 2.6 percent) and in small metropolitan areas (from 3.2 to 2.5 percent) (Figure 4). Although rates appear to decline in other regions and in non-metropolitan areas, these decreases did not reach statistical significance.

Number of Days Adolescents Used Inhalants

More than half of adolescents who used inhalants in the past year (58.6 percent) reported that they had

used 1 to 11 days in the past year (Figure 5). About a quarter (23.3 percent) had used 12 to 49 days, 8.4 percent had used 50 to 99 days, and 9.7 percent had

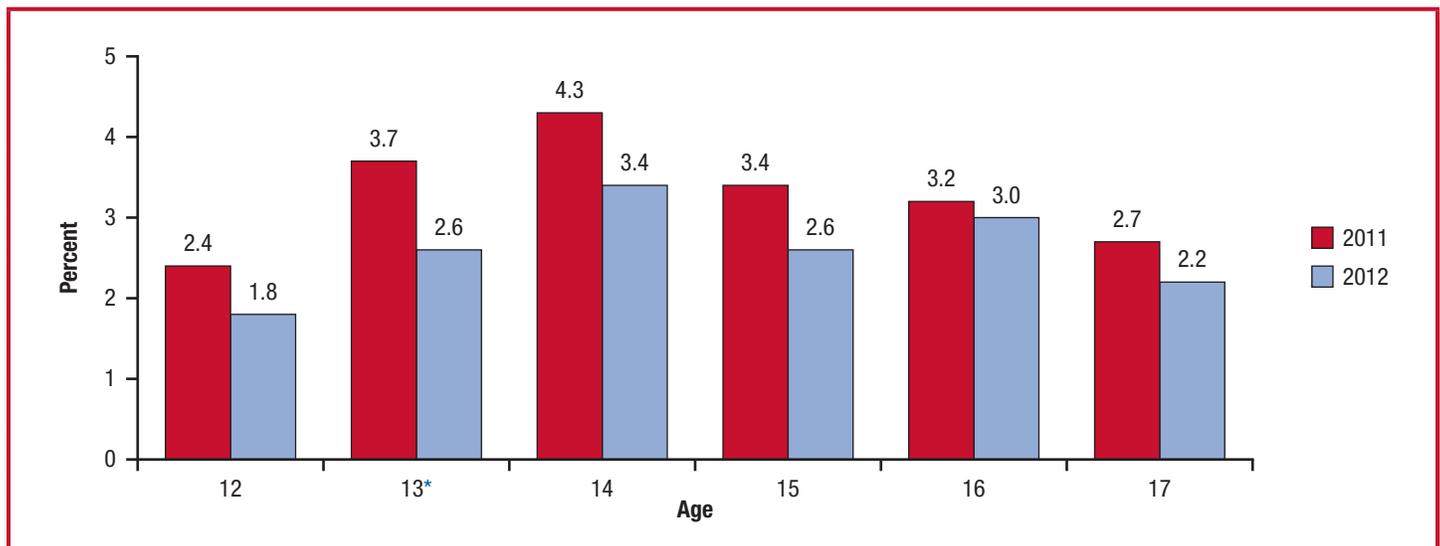
Table 1. Recent Trends in Past Year Inhalant Use among Adolescents Aged 12 to 17, by Region: 2011 and 2012

Region	2011	2012
Northeast*	3.5	2.1
New England*	3.4	2.0
Middle Atlantic*	3.6	2.1
Midwest	3.0	2.6
East North Central	2.6	2.7
West North Central*	3.8	2.2
South	2.7	2.7
South Atlantic	2.4	2.8
East South Central	3.1	2.7
West South Central	3.0	2.7
West*	4.3	2.8
Mountain	3.9	2.5
Pacific*	4.4	3.0

* The difference between the percentage for 2011 and that for 2012 is statistically significant at the .05 level.

Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Surveys on Drug Use and Health (NSDUHs), 2011 to 2012.

Figure 3. Recent Trends in Past Year Inhalant Use among Adolescents Aged 12 to 17, by Age: 2011 and 2012



* The difference between the percentage for 2011 and that for 2012 is statistically significant at the .05 level.

Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Surveys on Drug Use and Health (NSDUHs), 2011 to 2012.

used 100 or more days. Although past year inhalant use rate among adolescents is on the decline, the number of days inhalants were used in the past year among those adolescents who did use inhalants remained steady between 2011 and 2012 (data not shown).⁵

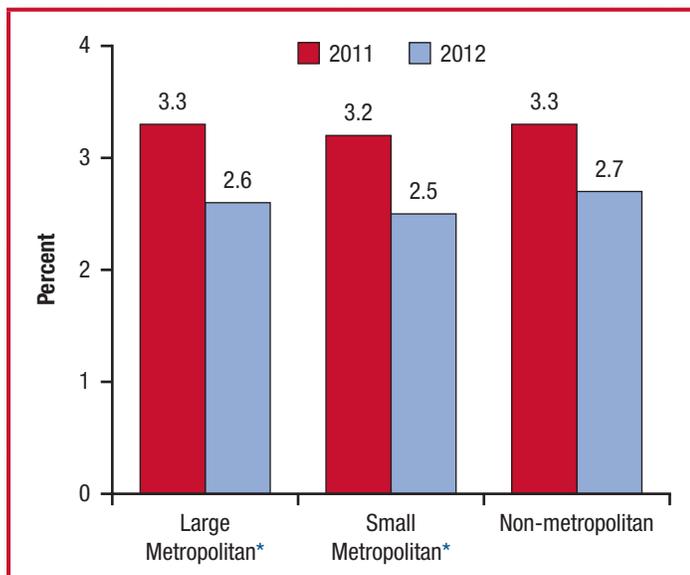
Discussion

The downward trend in the rates of inhalant use among adolescents is encouraging; however, nearly 40,000 adolescents use inhalants on any given day.⁶ Inhalants are highly accessible, cheap, and easy to hide; they are also addictive and deadly. Inhalants have the special risk of being deadly any time they are used—even the first time. Therefore, continuing efforts are needed to educate adolescents, parents, teachers, physicians, service providers, and policymakers about the dangers and health risks of inhalant use. For more information on the hazards of inhalant use, visit <http://www.drugabuse.gov/publications/research-reports/inhalant-abuse>.

End Notes

1. National Institute on Drug Abuse (2012). *Inhalant abuse*. Retrieved from <http://www.drugabuse.gov/publications/research-reports/inhalant-abuse>
2. The categories of inhalants asked about in the survey are (a) amyl nitrite, “poppers,” locker room deodorizers, or “rush”; (b) correction fluid, degreaser, or cleaning fluid; (c) gasoline or lighter fluid; (d) glue, shoe polish, or toluene; (e) halothane, ether, or other anesthetics; (f) lacquer thinner or other paint solvents; (g) lighter gases, such as butane or propane; (h) nitrous oxide or whippits; (i) spray paints; and (j) other aerosol sprays.
3. Findings are discussed for four U.S. geographic regions. 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. Additionally, data are presented for geographic subregions. For information on areas included in subregions, see http://www.census.gov/geo/maps-data/maps/pdfs/reference/us_regdiv.pdf.
4. Counties were grouped based on the 2003 Rural/Urban Continuum Codes developed by the U.S. Department of Agriculture. Each county is in either a metropolitan statistical area (MSA) or outside of an MSA. Large metropolitan (large metro) areas have a population of 1 million or more. Small metropolitan (small metro) areas have a population of fewer than 1 million. Non-metropolitan (non-metro) areas are outside of MSAs and include urbanized counties with a population

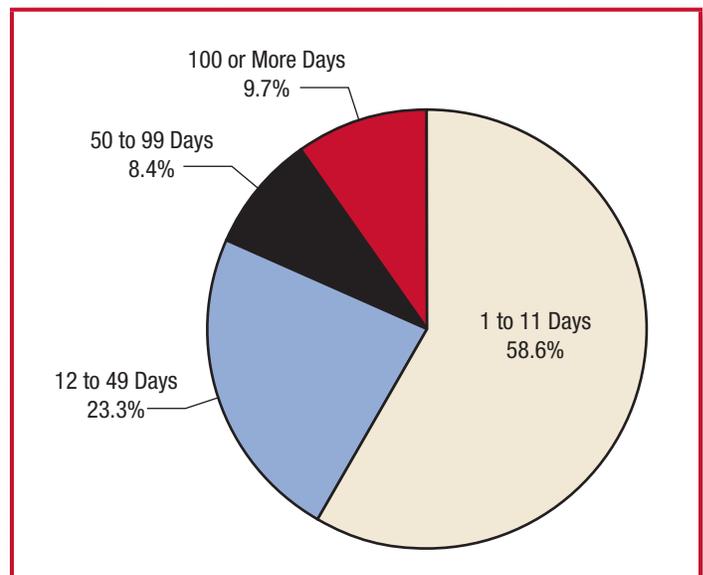
Figure 4. Recent Trends in Past Year Inhalant Use among Adolescents Aged 12 to 17, by County Type: 2011 and 2012



* The difference between the percentage for 2011 and that for 2012 is statistically significant at the .05 level.

Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Surveys on Drug Use and Health (NSDUHs), 2011 to 2012.

Figure 5. Number of Days Inhalants Were Used in the Past Year among Adolescents Who Used Inhalants in the Past Year: 2012



Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Surveys on Drug Use and Health (NSDUHs), 2011 to 2012.

of 20,000 or more in urbanized areas; less urbanized counties with a population of at least 2,500 but fewer than 20,000 in urbanized areas; and completely rural counties with a population of fewer than 2,500 in urbanized areas.

5. For more information, see Table 6.4B in the 2012 detailed tables: Center for Behavioral Health Statistics and Quality. (2013). *Results from the 2012 National Survey on Drug Use and Health: Detailed tables*. Rockville, MD: Substance Abuse and Mental Health Services Administration.
6. Center for Behavioral Health Statistics and Quality. (2013, August 29). *The CBHSQ Report: A day in the life of American adolescents: Substance use facts update*. Rockville, MD: Substance Abuse and Mental Health Services Administration.

Suggested Citation

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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 from adolescents aged 12 to 17 (23,500 in 2011 and 22,500 in 2012). 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 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. (2013). *Results from the 2012 National Survey on Drug Use and Health: Summary of national findings* (HHS Publication No. SMA 13-4795, NSDUH Series H-46). Rockville MD: Substance Abuse and Mental Health Services Administration.

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



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