

The NSDUH Report

October 30, 2012

Suicidal Thoughts and Behavior in 33 Metropolitan Statistical Areas: 2008 to 2010

In Brief

- Based on combined 2008 to 2010 data, an annual average of 8.5 million adults aged 18 or older had serious thoughts of suicide in the past year, 2.4 million made a suicide plan, and 1.1 million attempted suicide
- Rates of past year serious thoughts of suicide among adults ranged from 2.0 percent in the Raleigh MSA to 6.5 percent in the Salt Lake City MSA
- Rates of past year suicide planning among adults ranged from 0.2 percent in the Atlanta and Raleigh MSAs to 1.9 percent in the Las Vegas MSA
- Rates of past year suicide attempts among adults ranged from less than 0.1 percent in the Raleigh MSA to 0.8 percent in the Dallas MSA

Suicide is a major public health problem in the United States and a tragedy for all involved—family, friends, neighbors, colleagues, and communities. In 2008, suicide was identified as the 10th leading cause of death in the United States.¹ Individuals who die from suicide, however, represent a fraction of those who consider or attempt suicide, and research suggests that there may be between 8 and 25 attempted suicides for every suicide death.² Suicide is a public health concern that transcends State and regional borders. Research has shown that reported prevalence of serious suicidal thought, suicidal planning, and suicide attempts vary across States and across areas within States.^{3,4} Data on metropolitan areas provide additional insight into the distribution of adults with suicidal thoughts and behaviors and help State and local public health authorities to better understand and effectively serve their communities.

The National Survey on Drug Use and Health (NSDUH) can help address the need for more localized information on suicidal thoughts and behaviors. This issue of *The NSDUH Report* presents estimates of serious suicidal thought, suicidal planning, and suicide attempts among those aged 18 or older in 33 metropolitan statistical areas (MSAs) (Table 1); comparisons are made between each MSA and the Nation as a whole.⁵ In the 2008 to 2010 NSDUHs, all adult respondents were asked whether they had thought seriously about trying to kill themselves at any time during the past 12 months; those who reported having had serious thoughts of suicide were then asked whether, in the past 12 months, they had made any plans to kill themselves and whether they had tried to kill themselves. The MSAs were selected based on a combination of the available data and the intent to get population representation and regional coverage in the Department of Health and Human Services regions.⁶ All estimates in this report are annual averages based on the combined 2008 to 2010 data. Only differences in estimates that are statistically significant are discussed in the text.⁷

Past Year Serious Thoughts of Suicide

The 2008 to 2010 combined data indicate that about 1 in 26 (3.8 percent; 8.5 million) adults aged 18 or older had serious thoughts of suicide in the past 12 months (Table 2). Rates ranged from 2.0 percent in the Raleigh MSA to 6.5 percent in the Salt Lake City MSA (Figure 1). Among the 33 MSAs, Houston (2.7 percent), Kansas City (2.4 percent), and Miami (2.4 percent) had rates of adults with serious thoughts of suicide that were lower than the Nation as a whole. No MSAs had rates of adults with serious thoughts of suicide that were significantly higher than those in the Nation as a whole.

Table 1. National Survey on Drug Use and Health (NSDUH) Metropolitan Statistical Areas (MSAs)

Metropolitan Statistical Areas	Report Abbreviation
Albuquerque, NM	Albuquerque
Atlanta-Sandy Springs-Marietta, GA	Atlanta
Baltimore-Towson, MD	Baltimore
Boston-Cambridge-Quincy, MA-NH	Boston
Chicago-Joliet-Naperville, IL-IN-WI	Chicago
Cleveland-Elyria-Mentor, OH	Cleveland
Dallas-Fort Worth-Arlington, TX	Dallas
Denver-Aurora-Broomfield, CO	Denver
Detroit-Warren-Livonia, MI	Detroit
Honolulu, HI	Honolulu
Houston-Sugar Land-Baytown, TX	Houston
Kansas City, MO-KS	Kansas City
Las Vegas-Paradise, NV	Las Vegas
Los Angeles-Long Beach-Santa Ana, CA	Los Angeles
Manchester-Nashua, NH	Manchester
Miami-Fort Lauderdale-Pompano Beach, FL	Miami
Minneapolis-St. Paul-Bloomington, MN-WI	Minneapolis
Nashville-Davidson-Murfreesboro-Franklin, TN	Nashville
New Orleans-Metairie-Kenner, LA	New Orleans
New York-Northern New Jersey-Long Island, NY-NJ-PA	New York City
Philadelphia-Camden-Wilmington, PA-NJ-DE-MD	Philadelphia
Phoenix-Mesa-Glendale, AZ	Phoenix
Pittsburgh, PA	Pittsburgh
Portland-Vancouver-Hillsboro, OR-WA	Portland
Raleigh-Cary, NC	Raleigh
Salt Lake City, UT	Salt Lake City
San Diego-Carlsbad-San Marcos, CA	San Diego
San Francisco-Oakland-Fremont, CA	San Francisco
Seattle-Tacoma-Bellevue, WA	Seattle
St. Louis, MO-IL	St. Louis
Tampa-St. Petersburg-Clearwater, FL	Tampa
Tulsa, OK	Tulsa
Washington-Arlington-Alexandria, DC-VA-MD-WV	Washington

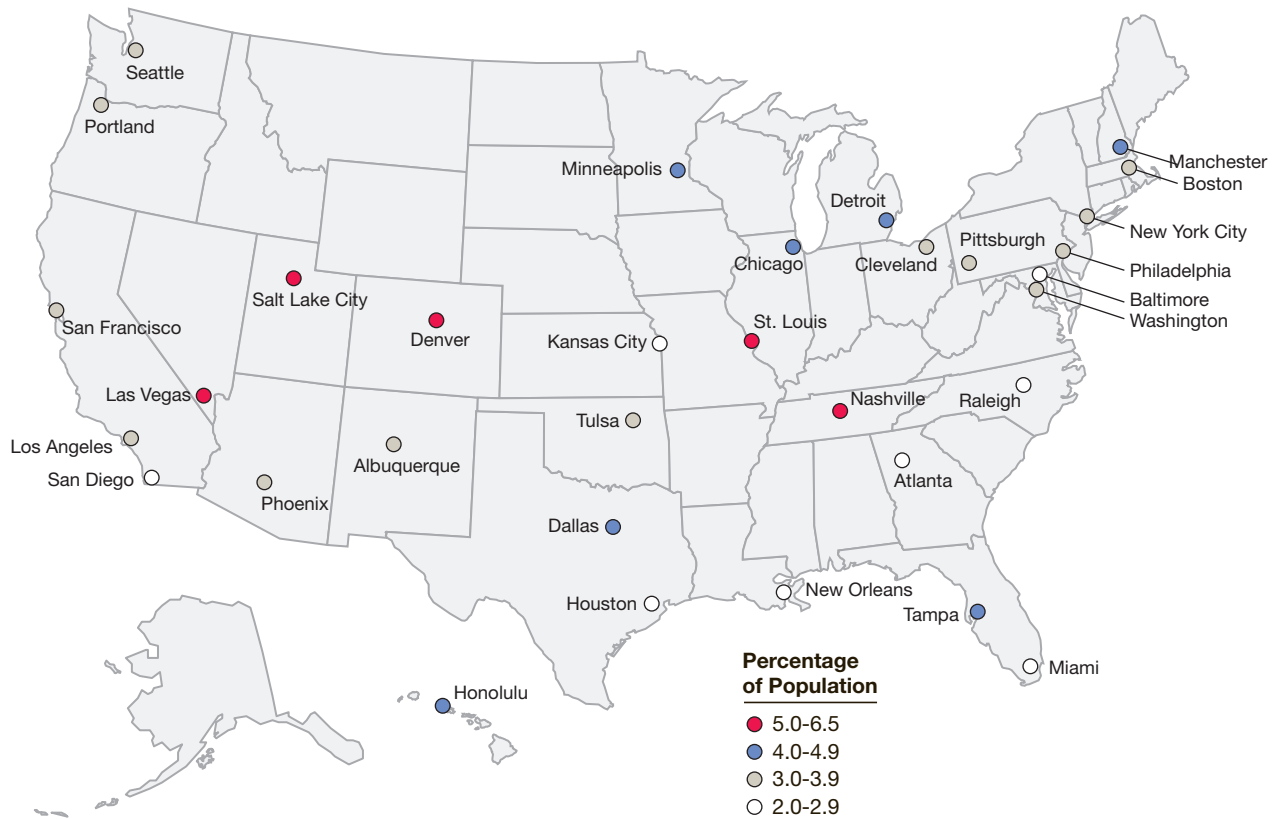
Past Year Suicide Planning

Nationwide, about 1 percent of adults aged 18 or older (2.4 million) made any plans to commit suicide in the past 12 months (Table 2). Rates ranged from 0.2 percent in the Atlanta and Raleigh MSAs to 1.9 percent in the Las Vegas MSA (Figure 2). Among the 33 MSAs, the rates of suicide planning were lower than the national average in Atlanta (0.2 percent), Cleveland (0.6 percent), Miami (0.5 percent), Pittsburgh (0.5 percent), Raleigh (0.2 percent), San Francisco (0.5 percent), Tulsa (0.4 percent), and Washington (0.5 percent). Again, no MSA rates were significantly higher than those in the Nation as a whole.

Past Year Suicide Attempts

Based on combined 2008 to 2010 data, about 1 in 20 (0.5 percent; 1.1 million) adults aged 18 or older made a suicide attempt in the past 12 months (Table 2). Rates ranged from less than 0.1 percent in the Raleigh MSA to 0.8 percent in the Dallas MSA (Figure 3). Among the 33 MSAs, Atlanta (0.1 percent), Boston (0.2 percent), Kansas City (0.2 percent), Philadelphia (0.2 percent), Portland (0.2 percent), Raleigh (<0.1 percent), San Diego (0.2 percent), St. Louis (0.2 percent), and Washington (0.2 percent) had rates that were lower than the Nation as a whole. No MSAs had rates of adults attempting suicide in the past year that were significantly higher than those in the Nation as a whole.

Figure 1. Serious Thoughts of Suicide in the Past Year among Persons Aged 18 or Older, by Metropolitan Statistical Area (MSA): 2008 to 2010



Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Surveys on Drug Use and Health (NSDUHs), 2008 to 2010 (revised March 2012).

Table 2. Suicidal Thoughts and Behavior in Past Year among Persons Aged 18 or Older, by Metropolitan Statistical Area (MSA): Annual Averages, 2008 to 2010

MSA	Serious Thoughts of Suicide: Percent (SE)	Made Any Suicide Plans: Percent (SE)	Attempted Suicide: Percent (SE)
Total United States	3.8 (0.08)	1.0 (0.04)	0.5 (0.03)
Albuquerque, NM	3.7 (1.34)	0.7 (0.24)	0.3 (0.17)
Atlanta-Sandy Springs-Marietta, GA	2.9 (0.60)	0.2* (0.09)	0.1* (0.09)
Baltimore-Towson, MD	2.5 (0.60)	0.7 (0.27)	0.5 (0.30)
Boston-Cambridge-Quincy, MA-NH	3.0 (0.62)	1.1 (0.38)	0.2* (0.08)
Chicago-Joliet-Naperville, IL-IN-WI	4.3 (0.40)	1.2 (0.22)	0.5 (0.17)
Cleveland-Elyria-Mentor, OH	3.6 (0.55)	0.6* (0.19)	0.2 (0.12)
Dallas-Fort Worth-Arlington, TX	4.2 (0.69)	1.4 (0.46)	0.8 (0.26)
Denver-Aurora-Broomfield, CO	5.7 (1.29)	1.4 (0.72)	0.4 (0.15)
Detroit-Warren-Livonia, MI	4.1 (0.45)	1.3 (0.25)	0.5 (0.14)
Honolulu, HI	4.0 (0.75)	1.2 (0.40)	0.4 (0.19)
Houston-Sugar Land-Baytown, TX	2.7* (0.54)	0.7 (0.24)	0.5 (0.25)
Kansas City, MO-KS	2.4* (0.60)	0.6 (0.35)	0.2* (0.09)
Las Vegas-Paradise, NV	5.7 (1.34)	1.9 (0.56)	0.5 (0.18)
Los Angeles-Long Beach-Santa Ana, CA	3.3 (0.45)	1.1 (0.26)	0.6 (0.20)
Manchester-Nashua, NH	4.5 (1.14)	1.4 (0.46)	0.3 (0.22)
Miami-Fort Lauderdale-Pompano Beach, FL	2.4* (0.45)	0.5* (0.18)	0.2 (0.14)
Minneapolis-St. Paul-Bloomington, MN-WI	4.0 (0.80)	1.1 (0.47)	0.5 (0.34)
Nashville-Davidson-Murfreesboro-Franklin, TN	5.0 (1.74)	1.6 (0.57)	0.4 (0.30)
New Orleans-Metairie-Kenner, LA	2.4 (0.78)	0.7 (0.38)	0.2 (0.18)
New York-Northern New Jersey-Long Island, NY-NJ-PA	3.4 (0.34)	0.9 (0.19)	0.5 (0.16)
Philadelphia-Camden-Wilmington, PA-NJ-DE-MD	3.5 (0.48)	0.7 (0.18)	0.2* (0.05)
Phoenix-Mesa-Glendale, AZ	3.5 (0.60)	1.0 (0.28)	0.5 (0.19)
Pittsburgh, PA	3.5 (0.56)	0.5* (0.14)	0.4 (0.16)
Portland-Vancouver-Hillsboro, OR-WA	3.4 (0.82)	1.0 (0.43)	0.2* (0.12)
Raleigh-Cary, NC	2.0 (0.94)	0.2* (0.14)	0.0* (0.04)
Salt Lake City, UT	6.5 (1.32)	1.7 (0.65)	0.7 (0.30)
San Diego-Carlsbad-San Marcos, CA	2.9 (0.64)	0.9 (0.60)	0.2* (0.09)
San Francisco-Oakland-Fremont, CA	3.0 (0.48)	0.5* (0.19)	0.3 (0.15)
Seattle-Tacoma-Bellevue, WA	3.9 (0.61)	0.7 (0.43)	0.7 (0.44)
St. Louis, MO-IL	5.5 (0.93)	0.8 (0.38)	0.2* (0.08)
Tampa-St. Petersburg-Clearwater, FL	4.4 (0.65)	1.4 (0.38)	0.6 (0.35)
Tulsa, OK	3.6 (0.88)	0.4* (0.22)	0.4 (0.25)
Washington-Arlington-Alexandria, DC-VA-MD-WV	3.0 (0.51)	0.5* (0.18)	0.2* (0.07)

SE = standard error.

* Difference between the MSA and the Nation as a whole is statistically significant at the .05 level.

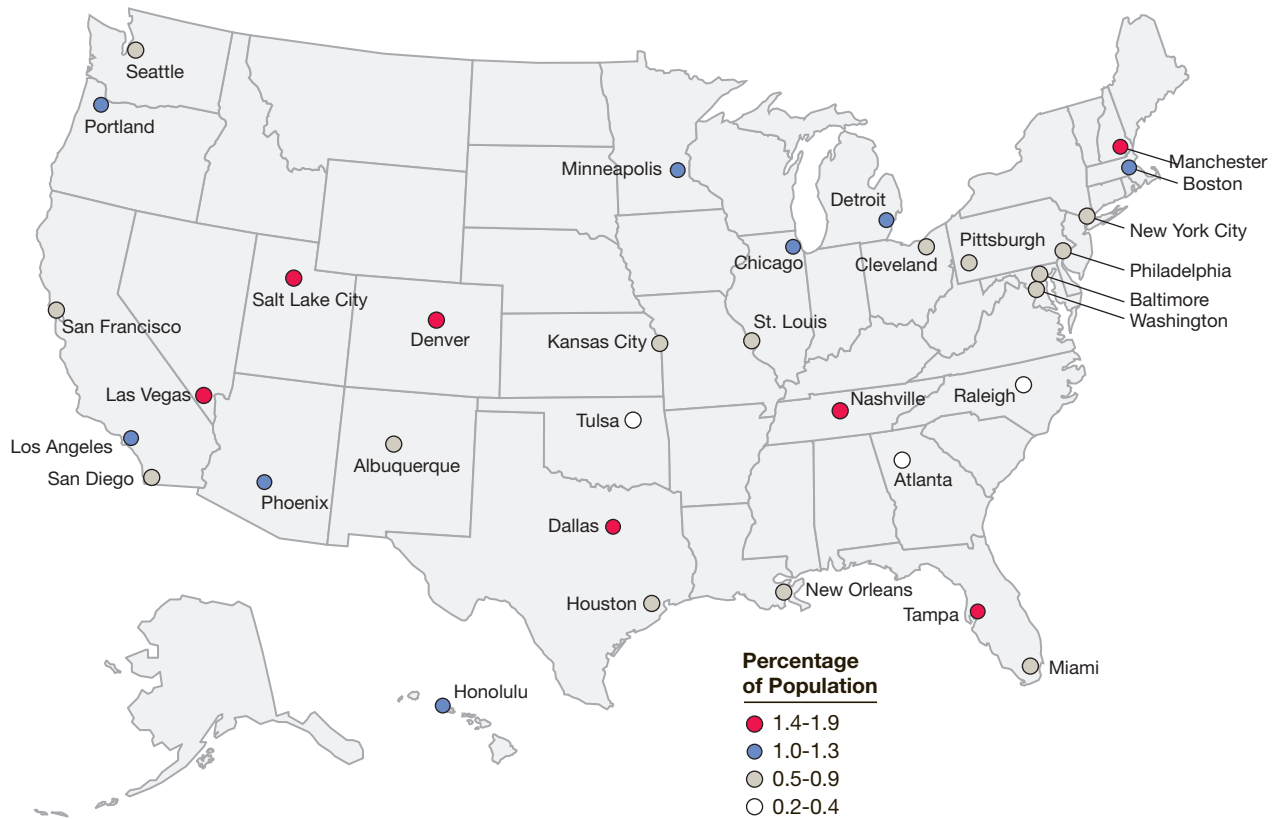
Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Surveys on Drug Use and Health (NSDUHs), 2008 to 2010 (revised March 2012).

Discussion

Suicide is a public health problem that transcends geographical boundaries. Behind the statistics on completed suicides are the troubling large numbers of Americans who think about, plan for, and attempt suicide every year. Preventing suicide and addressing the health care needs of persons at risk for suicidal behavior require public health information-sharing efforts that raise awareness and explain that effective preventive interventions exist. Highlighting

the prevalence of suicidal thoughts, plans, and attempts in metropolitan areas may help Federal, State, and local policymakers continue to plan for and allocate resources to reduce the stigma associated with mental and emotional problems and mental health treatment seeking. Further research on additional factors associated with geographic variations in the prevalence of suicidal behaviors is needed to help guide the development of screening tools and prevention and treatment programs.

Figure 2. Suicide Plans in the Past Year among Persons Aged 18 or Older, by Metropolitan Statistical Area (MSA): 2008 to 2010



Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Surveys on Drug Use and Health (NSDUHs), 2008 to 2010 (revised March 2012).

End Notes

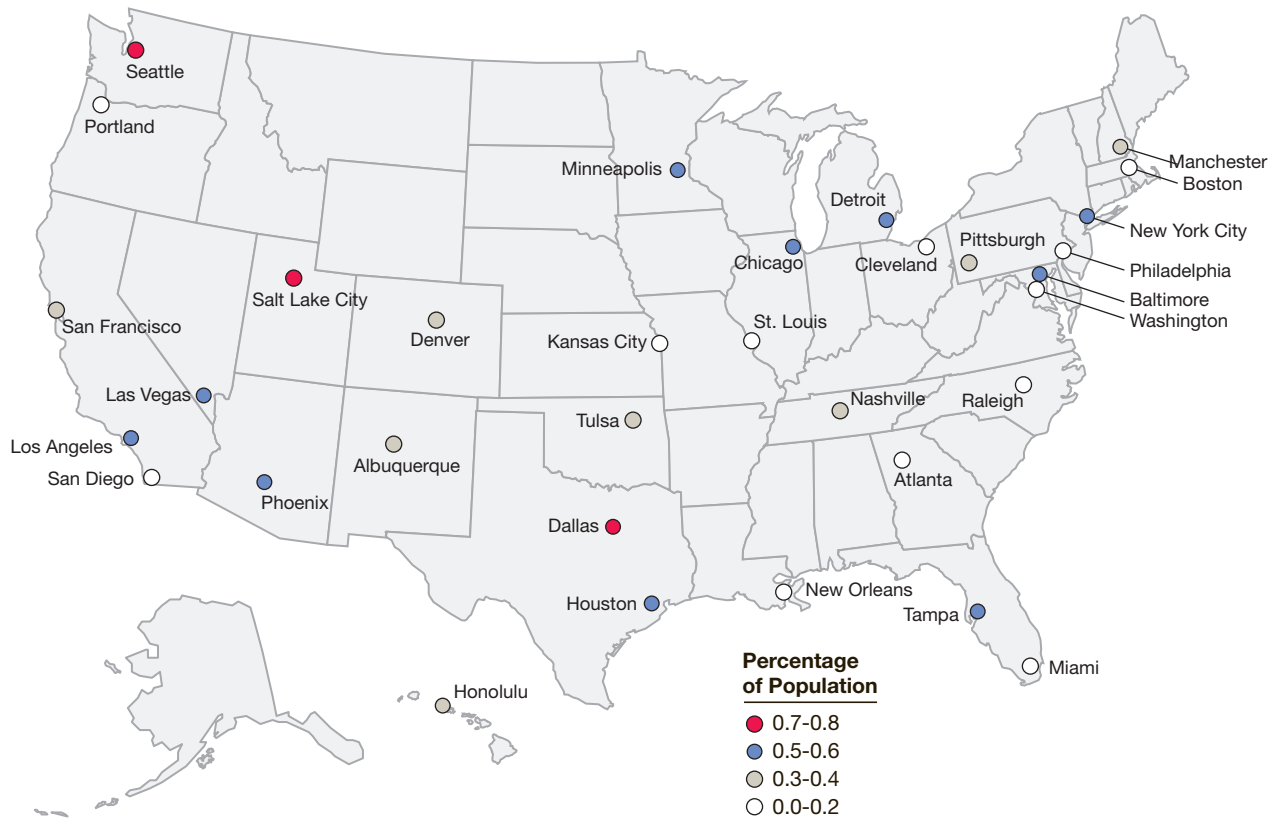
- ¹ Heron, M. (2012). *Deaths: Leading causes for 2008* (National Vital Statistics Reports, Vol. 60, No. 6). Hyattsville, MD: National Center for Health Statistics.
- ² Mościcki, E. K. (2001). Epidemiology of completed and attempted suicide: Toward a framework for prevention. *Clinical Neuroscience Research*, 1, 310-323.
- ³ Centers for Disease Control and Prevention. (2011). Suicidal thoughts and behaviors among adults aged ≥18 years—United States, 2008-2009. *Morbidity and Mortality Weekly Report*, 60(SS-13), 1-22. Retrieved from <http://www.cdc.gov/mmwr/pdf/ss/ss6013.pdf>
- ⁴ Centers for Disease Control and Prevention. (2012). Youth risk behavior surveillance—United States, 2011. *Morbidity and Mortality Weekly Report*, 61(SS-4), 1-162. Retrieved from <http://www.cdc.gov/mmwr/pdf/ss/ss6104.pdf>
- ⁵ MSAs are geographical entities used by Federal agencies to collect, analyze, and publish statistical data. These areas are defined and updated periodically by the Office of Management and Budget (OMB). MSAs defined in this report are based on updates made by OMB on December 1, 2009,

- to reflect Census Bureau population estimates for July 1, 2007, and July 1, 2008. More details are provided at <http://www.whitehouse.gov/sites/default/files/omb/assets/bulletins/b10-02.pdf>.
- ⁶ More information on the Department of Health and Human Services regional designations is available at U.S. Department of Health and Human Services. (2012). *HHS region map*. Retrieved from <http://www.hhs.gov/about/regionmap.html>
- ⁷ For some MSAs, the difference from the national estimate may appear larger than some of those noted in the text and figures; however, because of the larger variances in these MSAs, the differences are not statistically significant.

Suggested Citation

Substance Abuse and Mental Health Services Administration, Center for Behavioral Health Statistics and Quality. (October 30, 2012). *The NSDUH Report: Suicidal Thoughts and Behavior in 33 Metropolitan Statistical Areas: 2008 to 2010*. Rockville, MD.

Figure 3. Suicide Attempts in the Past Year among Persons Aged 18 or Older, by Metropolitan Statistical Area (MSA): 2008 to 2010



Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Surveys on Drug Use and Health (NSDUHs), 2008 to 2010 (revised March 2012).

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Findings from SAMHSA's 2008 to 2010 National Surveys on Drug Use and Health (NSDUHs)

Suicidal Thoughts and Behavior in 33 Metropolitan Statistical Areas: 2008 to 2010

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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 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 Behavioral Health Statistics and Quality. (2012). *Results from the 2011 National Survey on Drug Use and Health: Summary of national findings* (HHS Publication No. SMA 12-4713, NSDUH Series H-44). Rockville, MD: Substance Abuse and Mental Health Services Administration.

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



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